

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 2008.—VOL. XLIV.

LONDON, SATURDAY, FEBRUARY 14, 1874.

[WITH SUPPLEMENT.] {PRICE FIVEPENCE.
PER ANNUM, BY POST, £1 4s.

MR. JAMES CROFTS, STOCK AND SHARE BROKER,
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.

(Established 1842).
Every description of British and Foreign Stocks and Shares BOUGHT and SOLD.
SPECIAL BUSINESS IN COLLIERY and INOX shares.
* UNITED BITUMINOUS COLLIERIES shares are recommended as a sound investment. During 1873, 20 per cent. was earned; this year 40 per cent. is expected. In a late report on one of the collieries, the engineer says—"You will have a colliery second to none in the district, and which will yield a larger profit than many collieries which have cost thousands to develop."
Loans negotiated upon marketable Mining Shares and approved Stocks. The principal mining papers filed every week.
A List of Closing Prices issued every evening at Five o'clock.

MR. W. H. BUMPUS, STOCK AND SHARE DEALER,
44, THREADNEEDLE STREET, LONDON, E.C., has FOR SALE the

following SHARES, free of commission:—
100 Abernethy, 5s. 3d. 40 East Caradon, 19s. 100 Rookhope, 20s. 6d.
25 Birsley Creek, £3 3 9 40 Frontino, 6s. 6d. 15 Roman Grav., £16 1/2
70 Bog, 13s. 9d. 50 Flagstaff, £2 18s. 9d. 50 Rica (Gold), 11s. 6d.
100 Bampfyde, 25s. 25 Great Vor, 38s. 9d. 20 Richmond, £5 18s. 9d.
50 Boscawell, 9s. 3d. 20 Hington Down, 35s. 50 South Prince Patrick, 25s. 6d.
10 Cape Copper, £29 1/2 50 Ladywell, £2 1/2 25 Sweetland, £5 1/2
200 Cle Hill Colliery, 15s. 3 100 Last Chance, 25s. 15 South Aurora, 18s.
20 Cedar Creek, £2 1/2 150 Malabar, 15s. 6d. 20 South Keston, 15s. 6d.
100 Carn Camborne, 5s. 6d. 30 Marke Valley, 19s. 15 So. Condurrow, £4 1/2
60 Chontales, 17s. 100 Malpas, 21s. 3d. 10 Tankerville, £9 1/2
5 Cook's Kitchen, 15s. 150 New Pacific, 8s. 50 Tylwyd, 15s. 6d.
50 Don Pedro, 11s. 3d. 25 N. Quebrada, £4 8 9 60 Tecoma, 18s.
10 Drake Walls, 50 New Dolcoath, 23s. 40 Utah, 30s. 6d.
50 Emma (Silver), £2 18 9 100 Old Bathol, 25s. 6d. 25 Van Consoles, £3 1/2
5 East Lovell, 25 Pennerley, £2 1/2 15 W. Tankerville, £2 1/2
5 Eberhardt, £4 1/2 50 Perkins Beach, 6s. 9d. 50 West Godolphin, 15s. 6d.
25 East Van, 33s. 9d. 50 West Grenville, £5 1/2 50 Wheel Grenville, £5 1/2
25 East Grenville, 50 Penrithal, 17s. 6d. 20 Wheel Grenville, £5 1/2
W. H. B. transacts business in every description of stocks and shares at the best market prices, and free of commission.
Bankers: National Provincial Bank of England, E.C.

MR. E. J. BARTLETT, STOCK AND SHARE DEALER,
No. 30, GREAT ST. HELEN'S, LONDON, E.C., transacts business at net prices in every description of security.

Post free, Sixpence.
INVESTMENTS FOR 1874—A SAFE SELECTION.
Published by E. J. BARTLETT.
30, Great St. Helen's, London, E.C.

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77, CORNHILL, LONDON, E.C.
Specially recommends the purchase of shares in WHEAL CREBOR, TRELEIGH WOOD, OLD TREBURGETT (Preference Shares), and WHEAL GRENVILLE MINES.

The latest reports of the above mines forwarded on application.
Brokerage on Buying or Selling shares of £4 and upwards, 1 1/2 per cent., and 1s. per share on each under £4.

FERDINAND R. KIRK, STOCK BROKER,
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UNITED BITUMINOUS should be bought since the current earnings from coal, coke, and fire-clay are largely increasing; and the Weig Colliery will soon swell the returns.

FOR SALE, 20 Cardiff and Swansea, 5 Brynny, 15 Bampfyde, and 10 Franco Consols.

The following colliery shares may be bought with advantage:—Cardiff and Swansea, West Mostyn, Welsh Freehold, and Newport Abcaron. Further particulars if required.
SPECIAL BUSINESS IN Flagstaff, Last Chance, Cedar Creek, Tecoma, Tylwyd, Emma, and Richmond.

All Colliery and Iron Shares dealt in, whether quoted or not.

Bankers: London and Westminster, and City Bank.

MR. WILLIAM WARD
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MR. HENRY MANSELL, STOCK AND SHARE DEALER,
14, GREAT WINCHESTER STREET, LONDON, E.C.
H. M. recommends the purchase of COLORADO TERRIBLE shares.

MR. THOMAS THOMPSON, JUN., 1, PALMERSTON BUILDINGS, BISHOPSGATE STREET, LONDON, E.C.
Some valuable hints as to the purchase of mining shares will be found in Mr. Thompson's "Investment Circular" for February now ready, post free, price 6d.

MR. W. TREGILLAS, 122, BISHOPSGATE STREET WITHIN, E.C.,
Deals in all descriptions of Stocks and Shares at close market prices.

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Government and every negotiable Stocks dealt in for cash or account. Orders and telegrams punctually attended to.
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Speculative accounts opened for the fortnightly settlement.
Scale of Commissions on application.

MESSRS. WM. MARLBOROUGH AND CO.,
29, BISHOPSGATE STREET WITHIN, LONDON, E.C. (Established 18 years), have FOR SALE the following SHARES at prices annexed:—
50 All-y-Crib, 11s. 6d. 25 Great Vor, 38s. 9d. 25 N. Carn Brea, £2 12s. 6d.
5 Anglo-American Telegraph, £7 1/2 15 Herodfoot, £5. 25 So. Condurrow, £4 7 6
75 Boscawell Downs, 25s. 20 Hington, 32s. 50 Sweet Creek, £4 18s. 9d.
50 Birsley Creek, £2 19s. 20 Ladywell, £2 16s. 3d. 50 South Tolcarne, 15s. 6d.
20 Bog, 16s. 9d. 15 Lovell, 3s. 6d.
50 Cedar Creek, 43s. 6d. 50 Last Chance, 25s. 6d. 75 Tecoma, 18s. 9d.
5 Cook's Kitchen, £3 1/2 50 Malpas, 20s. 9d. 50 Tylwyd, 15s. 6d.
60 Chontales, 17s. 25 Medlyn Moor, 12s. 6d. 20 Tankerville, £3 19s. 6d.
5 Carn Brea, £4 1/2 30 New Quebrada, £4 1/2 20 Van Consoles, £3 3 9
50 Colorado, £4 1s. 3d. 75 New Dolcoath, 20s. 3d. 20 West Chiverton, £6.
5 Cape Copper, 22s. 20 New Rosario, 17s. 6d. 20 W. Tankerville, 43s. 9d.
50 Cle Hill Colliery, 16s. 70 New Harleston, par. 20 Wheel Crebor, £3 2 6
5 Dolcoath, £4 1/2 20 New Hendra, 20s. 9d. 15 Wh. Grenville, £5 1/2
5 Eberhardt, £4 1/2 50 Old Treburgett, 20s. 6d. 50 Wheel Peavor, £2 19s. 6d.
5 Emma, £2 19s. 20 Old Bathol, 25s. 6d. 15 Wh. Tankerville, £2 1/2
5 East Van, 32s. 25 West of Wales, 5s. 3d. 35 West Esgrail, £2 1/2
5 East Chiverton, 25s. 50 Perkins Beach, 6s. 9d. 50 Wheel Uny, £2 12s. 6d.
5 Eastern Exten., £3 1 3 30 Pennerley, £1 16s. 3d. 70 West Godolphin, £5 1/2
5 East Lovell, £10 8s. 9d. 75 Penrithal, 17s. 6d. 70 Wedgwood Coal and Iron, £7.
5 East Basset, £7 1/2 15 Rosewall Hill, 16s. 3d. 5 W. Cumberland, £2 1/2
5 Flagstaff, £3. 15 Roman Gravels, £16 1/2 dis.

MR. GEORGE BUDGE, STOCK AND SHARE DEALER,
No. 4, ROYAL EXCHANGE BUILDINGS, LONDON, E.C. (Established 24 years), has SPECIAL BUSINESS in the following:—
4000 Caradon; 250 West Caradon; 15 Mineral Hill; 15 Van; 20 Van Consols; 10 Fortescue; 35 Wheel Crest; 30 Ladywell; 80 Prince of Wales; 50 West Godolphin; 50 Old Treburgett; 10 East Basset; 250 Crenver and Wheel Abraham; (30s. paid); 100 West Esgrail; 20 Wheel Peavor; 100 Steam Stoker Company, fully paid; 100 Wheel Mary; 20 Tifford Colliery Company (fully paid); 100 Gwydyr Park; 20 East Van; 50 New Dolcoath; 35 Pennerley; 20 Wheel Kitty (St. Agnes); 50 Perkins Beach; 100 New Pacific; 50 Newfoundland; 100 Exchequer; 150 Van; 100 Mammoth Copperopolis; 100 South Aurora; 40 East Chance; 30 Cedar Creek; 100 New Rosario; 125 Santa Barbara; 45 Cedar Creek; 50 Utah; 200 Rodanmutans; 80 Malpas; 100 Tecoma; 50 Chicago (fully paid).

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Twenty-nine years' experience.

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Established 1857.
Mr. THOMAS is in receipt of regular and reliable information from the seat of mining operations in Utah, which is at the service of clients.

WHAT TO SELECT—WHAT TO AVOID.
BY FREDK. WM. MANSELL, (SWORN BROKER).
PINNER'S HALL, OLD BROAD STREET, LONDON, E.C.

Established 1857. Bankers: London Joint-Stock Bank.

MCKENNA & CO., STOCK AND SHARE BROKERS,
5, UNION COURT, OLD BROAD STREET, E.C.

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Before investing, read our publications:—
"Handy Book for Investors" (third edition), price 10s. 6d.
"British Mines and Mining," price 2s. 6d.
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The "Investment and Financial Record," will be sent FREE on application.
Bankers: London and Westminster.

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3, CRAVEN STREET, STRAND, LONDON, AND ST. AUUSTELL, CORNWALL, transact business in all Stocks, Shares, and Miscellaneous Securities, at close market prices.

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50 Almada, 15s. 6d.	50 Gawton, 10s. 6d.	70 Plymouth-mun, 6s. 6d.
70 Australian, £2.	20 Great Vor, £1.	60 Parys Mount, 7s. 6d.
10 Bellavista, £9.	10 Great Luxey, £12 1/2.	70 Prince of Wales, 5s. 6d.
25 Bedford Unit., 12s. 9d.	10 Grogwinlon, £2 1/2.	10 Roman Gravels, £16.
50 Boscawell, 9s. 3d.	60 Gt. West Van, 30s.	30 Richmond, £5 1/2.
50 Chicago, offered wanted.	70 Gold Run, 4s. 6d.	25 Rookhope, 19s. 9d.
10 Cape Copper, £28 1/2.	50 Herodfoot, £1.	50 So. Carn Brea, £2 1/2.
10 Cook's Kitchen, £9.	20 Hington Down, 11s. 6d.	40 So. Rom Grav., 18s.
2 Carr Brea, £55.	30 Ladywell, £2 1/2.	50 St. Dennis Consols, £2
70 Cle Hill Col., 14s. 9d.	50 Last Chance, 17s. 6d.	20 Sweetland, £5 1/2.
5 Dolcoath, £40.	40 Marke Valley, 10s. 6d.	20 Tankerville, £8 1/2.
80 Don Pedro, 12s. 6d.	60 Malpas, 17s. 6d.	10 Tincroft, £35.
30 Emma, £3 1/2.	70 New Dolcoath, 19s. 6d.	30 Van Consoles, £3.
25 East Van, £1 1/2.	60 New Quebrada, £4.	25 Wheel Crebor, £3.
10 East Lovell, £9 1/2.	70 New Pacific, 6s. 9d.	20 Wheel Tregoss, £1.
10 Eberhardt, £1 1/2.	30 Pennerley, £1 1/2.	80 West Maria, 3s. 3d.
20 Flagstaff, £2 1/2.	40 Old Bathol, 10s. 6d.	20 Wheel Mary, 15s.
10 Fortuna, £5 1/2.	20 Old Treburgett, 18s. 6d.	10 Wh. Grenville, £5 1/2.

W. S. TIPSON, GRECIAN CHAMBERS, DEVEREUX COURT, TEMPLE, SHAREDEALER.

Amongst the following are many that are likely to rise 50 per cent. before June, and worthy the immediate notice of investors at present low prices, and repay when foreign mines may not:—100 Fortescue Tin, 3s. 6d.; 10 Providence, £5 1/2; 10 Mary Ann, £1 1/2; 45 Rosewall Hill, 13s.; 5 West Seton, £18; 3 Dolcoath, £41; 5 Wheel Seton, £15; 7 Cook's Kitchen, £8; 50 New Dolcoath, 20s.; 10 West Basset, £7 1/2; 3 Carn Brea, £45; 25 Gawton, 13s. 6d.; 25 Uny, 52s. 6d.; 4 Wheel Basset, £15.
OFFERS WANTED—50 Great West Van, 30 Van Consols, 50 Marke Valley, 30 East Caradon.
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Bankers: London and Westminster, Lothbury.

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Every kind of shares bought or sold, net or on commission. Shares not generally negotiable exchanged.

Bankers: The London Joint-Stock.

MESSRS. MILLER AND CO., STOCK AND SHARE DEALERS,
53, BISHOPSGATE WITHIN, LONDON, E.C. PUBLISH A DAILY and WEEKLY LIST of Prices of Funds, Government Securities, Banks, Railways (home and foreign), Mines, Docks, Gas, Telegraph, Waterworks, and miscellaneous companies shares.

All orders punctually attended to, for cash or account.
Bankers: Prescott, Grote, Cave, and Co., Threadneedle-street, London, E.C.

TO BE SOLD (to close an account), FIFTY WEST JEWELL SHARES (£2 paid), no further liability, for £27 10s.
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MR. JAMES STOCKER, STOCK AND SHARE DEALER,
2, CROWN COURT, THREADNEEDLE STREET.

SPECIAL BUSINESS in the following:—
20 Almada, 20s. 20 Great Vor, 34s. 9d. 25 So. Condurrow, £4 1/2
35 All-y-Crib, 11s. 3d. 100 Gold Run, 5s. 50 South Aurora, 15s. 6d.
100 Bampfyde, £2 1/2 35 Grogwinlon, £2 1/2 35 So. Carn Brea, 59s.
40 Bedford Unit., 20s. 20 Great Luxey, £12 1/2 20 Spear Moor, off. wtd.
45 Birsley, £3 1s. 6d. 35 Hington, 32s. 6d. 20 Sweetland, £5 1/2
10 Bellavista, offer wtd. 45 Ladywell, 48s. 9d. 100 Thornhill Reef, 37s.
50 Bog, 15s. 9d. 25 Last Chance, 25s. 9d. 100 Tecoma, 16s. 6d.
150 Boscawell Downs, 10s. 10 Lovell (Tin), £2 1/2 20 Tylwyd, 26s.
45 Blue Tent, £4. 65 Malabar, 14s. 25 Tankerville, £8 18s.
2 Carr Brea, £46 1/2. 75 Malpas, 20s. 6d. 20 Trumpet, offer wtd.
50 Chontales, 17s. 60 Marke Valley, 17s. 6d. 4 Tincroft.
50 Cwm Elan, 3s. 65 New Pacific, 7s. 6d. 1 Trevegean, £70.
10 Cook's Kitchen, £9. 100 New Dolcoath, 20s. 50 United Bituminous.
70 Cedar Creek, £2s. 9d. 45 New Hendra, 21s. 9d. 50 Utah, 29s.
60 Cle Hill Col., 15s. 6d. 85 New Rosario, 18s. 70 Van Consols, £3 8s. 9d.
70 Don Pedro. 60 N.W. Rosewarne, 18s. 60 West Caradon, 1s. 9d.
3 Dolcoath, £44 1/2. 50 Old Bathol, 10s. 6d. 60 West Chiverton, 55s.
5 East Basset, £4 1/2. 100 Old Treburgett, 20s. 70 West Godolphin, 36s.
35 East Caradon, 18s. 9d. 70 ditto preference, 18s. 20 West Maria, 3s. 3d.
40 East Grenville. 70 ditto preference, 18s. 25 W. Esgrail, £3.
10 East Lovell, £10. 70 Perkins Beach, 6s. 9d. 10 West Jewell.
15 East Pool. 45 ditto preference. 10 West Basset.
15 East Van, 30s. 100 Penrithal, 17s. 9d. 2 West Seton.
50 Eberhardt, £1. 75 Port Phillip. 35 Wheel Crebor, £3 1/2.
30 Emma, £2 19s. 100 Prince of Wales, 5s. 9d. 30 Wh. Grenville, £5 1/2.
100 Exchequer, 14s. 6d. 80 Rica, 11s. 6d. 30 W. Wh. Gorland, £1 1/2.
70 Frontino, 6s. 6d. 100 Rookhope, 19s. 5 Wh. Margaret, £2 1/2.
50 Gawton, 11s. 9d. 25 Richmond, £9. 25 Wheel Peavor.
40 Gt. Nevada, off. wtd. 70 So. Tolcarne, off. wtd. 25 Wheel Uny, £2 1/2.
80 Great West Van, 34s. 60 S. Roman Grav., 19s. 70 Yorke Peninsula, 6s.

Bankers: London and Westminster.

MR. CHARLES THOMAS,
MINING AGENT
3, GREAT ST. HELEN'S, LONDON, E.C.

MESSRS. A. W. THOMAS AND CO.,
10, COLEMAN STREET, E.C.,
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GEORGE LAVINGTON, STOCK AND SHARE BROKER,
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MESSRS. PENNINGTON AND CO., 3, ROYAL EXCHANGE BUILDINGS, E.C., STOCK AND SHARE DEALERS, have BUSINESS in the undermentioned:—

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Emma. West Wheel Gorland. Malpas.
Flagstaff. Gold Run. Buller.
Kitty (St. Agnes). Pacific. Rica.
Cedar Creek. Malabar. West Esgrail Lie.

Parties wishing to purchase or sell in the foregoing are requested to make application. PENNINGTON AND CO., SWORN BROKERS.

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MESSRS. PENNINGTON AND CO.'S "MONTHLY RECORD OF INVESTMENTS," published on the first Thursday in each month, contains an exhaustive Review of the British and Foreign Stock and Share and Money Markets, &c., with an enumeration of safe investments, paying from 10 to 20 per cent. Price 6d. per copy, or 8s. annually.
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MESSRS. W. J. TALLENTIRE AND CO., STOCK AND SHARE DEALERS, 20, CHANGE ALLEY, CORNHILL, LONDON, E.C., transact business in Stock Exchange Securities and Mining Shares of every description.

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Railways, Bank Shares, Mines, should consult

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(late of 3, Union-court, Old Broad-street); and
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Business done in all kinds of Stocks and Shares.
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3 AND 4, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C.

Orders received and commissions executed.
Bankers: National Provincial Bank of England.

W. D. and Co. have FOR SALE the following at net prices:—

50 Abernethy, 5s.	10 Lovell (Tin), £2 7s. 6d.	25 Tecoma, 12s. 6d.
50 Bedford United, 15s. 6d.	25 Malpas, 17s. 6d.	20 Trevarrack, 18s. 9d.
20 Birsley Creek, £3 2 6	50 New Pacific, 8s.	50 Tylwyd, £1 3s. 9d.
50 Brynny, 17s.	100 New Dolcoath, £1.	25 Uni. Bituminous, £1 2
25 Butson and Butson, 13 No. Rooker (ex call), £1 10s.	50 Rookhope, 19s.	10 West Basset, £7.
50 Caegynon, 7s. 6d.	50 Old Treburgett (preference), 18s. 9d.	100 West Caradon, 2s. 3d.
1 Carn Brea, £45.	50 ditto (original), £1.	5 West Esgrail Lie.
10 Cook's Kitchen, £8 10s.	25 Pennerley, £1 17s. 6d.	5 West Frances, £9.
2 Dolcoath, £45.	100 Prince Patrick, £3 2 6	50 W. Godolphin, £3 2s. 6d.
10 Dylliffe, £6 10s.	20 Richmond Con., £5 15	100 W. Pant-y-go, 4s. 6d.
5 East Basset, £3.	10 Rio Tinto, £6 2s. 6d.	3 West Seton, £22.
50 E. Grenville, 4s. 6d.	50 Rookhope, 19s.	15 Wheel Agair, £1 5s.
20 Eberhardt, £3 15s.	25 Rosewall Hill, 16s.	5 Wheel Buller, off. wtd.
5 Emma, £3.	10 So. Condurrow, £4 7s. 6d.	20 Wheel Crebor, £3 10s.
25 Flagstaff, £2 17s. 6d.	50 So. Roman Grav., 18s.	10 Wh. Grenville, £3 15s.
100 Fortescue, 4s.	50 South Tolcarne, 11s.	5 W. Kitty (St. Agnes), £3 15s.
25 Gawton, 14s.	5 St. Ives Consols, £7.	4 Wheel Seton, £12.
20 Grogwinlon, £3.	5 Tankerville, £8 17s. 6d.	20 Wheel Uny, £2 18s. 9d.
25 Last Chance, £1 2s. 6d.		

DEAR COAL MEANS INCREASED PROFITS TO COLLIERY OWNERS!—Every investor should, therefore, secure a stake in sound colliery companies, which invariably pay remarkably well. We are in a position to recommend several eminently desirable investments of this class, and we will forward details on application.

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VALUABLE AND EXTENSIVE DEPOSITS OF IRONSTONE,
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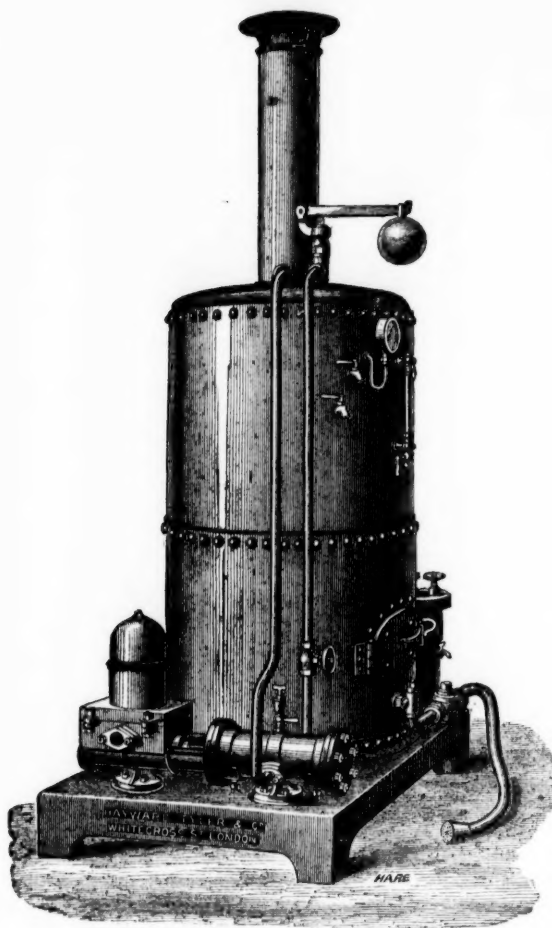
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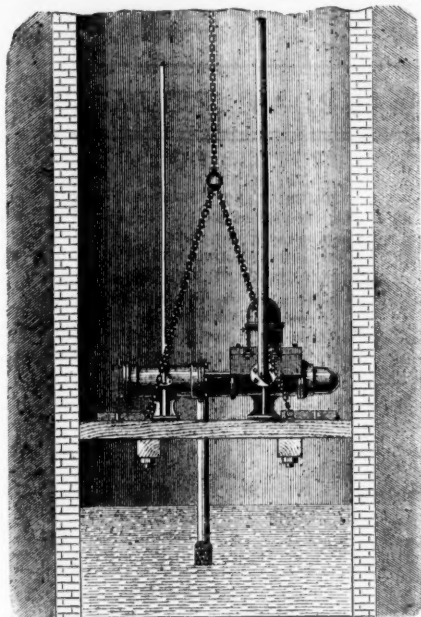
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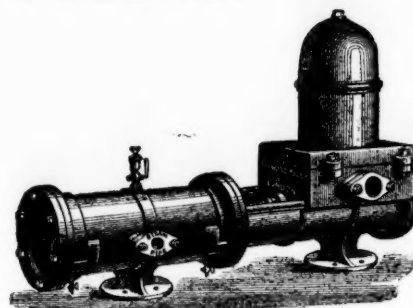
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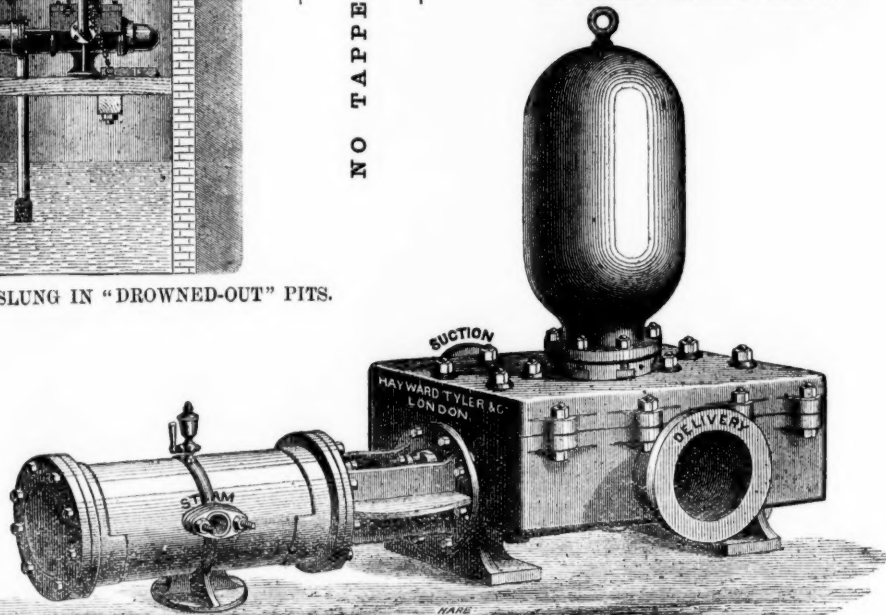
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Lectures at the Royal School of Mines.

ON METALS.

Dr. PERCY, F.R.S., in delivering his fourth lecture, took for his subject "ZINC." Before proceeding to that subject, however, he wished to make a few more remarks about copper smelting. The variety of copper known in the market as "best selected" is so called because it is supposed to be copper in its highest state of purity, and is always used for the purpose of making the best alloys of copper—brass, for example. This best selected copper is made with a view to its purity. Instead of proceeding exactly in the manner described on the last occasion, the process is somewhat modified. You will remember that in the process of copper smelting, as then described, we had two operations of fusing—the first and second fusion. In this process we obtain the "metal" (a compound of copper, iron, and sulphur) or regulus, which contains a larger percentage of copper than that produced by the first fusion, and less than that produced by the second fusion. Now, let us suppose our copper ore is contaminated with tin, for an example, and we wish to prepare from it "best selected" copper. We take blocks of the "metal" referred to above, and put them into a furnace, and strongly heat so as to melt the pieces, and then allow a free access of air to the molten mass. We heat so far as to separate only a portion of the copper, and not the whole of it; and as the result of the operation we shall get a quantity of metallic copper in the furnace, and there will remain a quantity of unchanged metal. We tap them both out, and now we shall find that in the metallic portion nearly the whole of the tin existing in the ore will be concentrated. The metallic copper in being reduced and dropping through the mass in drops, the particles will act on the tin compound existing in the metal, and will bring the tin into the metallic state, and the tin will become alloyed with the copper, and go down with it. We then take the remaining unchanged "metal," and proceed with it, as described in the last lecture. The copper thus separated is alloyed with tin, and is cast into small more or less square thin pieces, which are known in the market as "tile copper." The varieties of copper known in commerce are these—first, in order of purity comes "best selected;" then copper intended for rolling, which is cast into large rectangular blocks, and all such copper, which is called "tough cake copper," contains a small quantity of lead, expressly added during the operation; then, lastly, is the variety known as "tile copper," which is the least pure. The process of copper smelting usually occupies, speaking roughly, 100 hours.

We will now turn to the metal Zinc. The name by which this metal is known in the workshops of England is "spelter," derived from an old name, and at one time, not very long ago, "spelter" was the only name by which this metal was known to the workmen. Now, it is usual to apply the term "spelter" to the metal cast into ingots, and the term zinc to the same metal rolled out. It was unknown to the ancients in a separate state, but they were well acquainted with it in combination with copper. As far as I can make out, it was first known in a separate condition in the sixteenth century. You will naturally ask how we know that the ancients were acquainted with zinc in the state of an alloy. Well, in two ways, in the works of the ancient writers, Pliny for example. On this subject we find certain methods there described, which show they were acquainted with the method for making brass, and also with that method which till very recently was the only one known. In the second place, there have come down to us coins of known date from ancient times, and these on being analysed have proved to be true genuine brass. With regard to the physical properties of zinc; it belongs to the class of white metals, though in reality its colour is not a pure white, but bluish white; it may be made to receive a high lustre by polishing. With respect to hardness, it must be called a comparatively soft metal; it clogs the file, hardly malleable at ordinary temperatures—in fact, not at all so practically, but only this century it was discovered that if you heat the metal up to a certain degree you can roll it out into thin sheets; the temperature at which zinc rolls is between that of boiling water (212°), and say 300°F.; but if you want a practical test you can apply this homely one, as the laundress does with her iron. About the proper temperature is that when the saliva glides off the metal; it can also be drawn out into wire. Copper, when being rolled out, is apt to crack and break unless heated strongly every now and then—"annealed," but if you try to anneal zinc, and get the metal a little too hot, it becomes brittle, and can be broken across without the least difficulty. As some of you will know, when tin is bent you can hear a crackling sound; a piece of ordinary zinc thus bent does not give the slightest sound, but this overheated zinc emits a sound when bent, breaks across readily, and shows a crystalline fracture. The explanation is that when we thus heat zinc we give the particles of the metal sufficient freedom to enable them to assume these crystalline forms. The same thing takes place when iron is overheated, but in this case we require a much higher temperature than in the case of zinc. The specific gravity of zinc is 7.148—that is to say, that bulk of bulk zinc is a little more than seven times as heavy as water; its tensile strength is such that a bar, 1 square inch in section, will resist a pulling force equal to 2½ tons. Zinc melts at a higher temperature than lead, somewhere about 815° F. A piece of solid zinc exposed to the air will remain unchanged, provided moisture be absent, and in water, too, it will undergo no change provided the water be pure, but if the zinc be in the state of fine powder, and it be put into pure water and heat applied, then at a temperature much below the boiling point the zinc will be acted upon, it will decompose the water, and itself taking up the oxygen, the hydrogen will be set free. In common moist air the zinc will tarnish or rust, and that tarnish or rust is a compound consisting of oxide of zinc, water, and carbonic acid. Unlike iron, the rusting of zinc is not promoted by the first coating of rust formed upon the surface. Rusting in general is promoted or caused by the deposition of a film of liquid water upon the metal; the water so deposited dissolves atmospheric air, but has the oxygen in greater proportion than it exists in the air, and thus in a state favourable to act more powerfully. A famous chemist has computed (his observations were made with regard to Munich, I believe) that to rust through zinc sheathing of ordinary thickness would require from 200 to 300 years. Zinc and oxygen have a powerful affinity for each other; the oxygen combines with the zinc when melted, forming oxide of zinc, the latter body being that light cloudy substance floating about in fumes from the fused metal; it is a white body, quite insoluble in water, but dissolves in various acids, and also in common ammonia water. Although white when cold, it is yellow when hot. Perhaps some of you may have noticed the smoke escaping from a brass founder's chimney; the fumes of it have quite a distinct yellow tinge, and this colour is due to the presence of a small quantity of oxide of zinc carried up by the draught. It is also used as a paint, but it has not much body compared with white lead, but it has one advantage over white lead in that it does not blacken by exposure to the air; water-colour painters use this oxide of zinc, and it is largely made up as a pigment in the United States. It is used also by potters for the purpose of modifying the various colours used in their art.

Now, with regard to the metallurgy of zinc, the question is how can we get the metal from this oxide. By mixing the oxide with finely-powdered charcoal, and exposing the mixture to a high temperature—a good bright-red heat—then the charcoal will burn at the expense of the oxygen contained in the oxide, just as it would burn in the air at the expense of the oxygen of the air. The charcoal must be in excess of that chemically required, in order that the carbonic acid first formed may by contact with a fresh quantity of charcoal become converted into carbonic oxide. In this manner there is no difficulty whatever in reducing oxide of zinc; the real difficulty is to catch the metal when it is reduced, for it is very volatile, and distils readily at a bright-red heat. The reduction of the oxide of zinc never takes place at a temperature lower than that at which the metal is volatile. Oxide of zinc combines with many acids to form salts; common white vitriol is nothing more than sulphate of zinc; it combines with silica, forming silicate of zinc, which is difficultly fusible, and if to this silicate we add some borax we get a beautiful white glass formed. The oxide of zinc has been used in

the manufacture of glass, and in the Museum are some specimens of zinc glass, formed of silicate of oxide of zinc and potash.

There is another compound of zinc to which I want to draw your attention—the sulphide of zinc. Sulphur and zinc combine easily when heated together, with development of much heat and light. It is nearly white, occurs abundantly in Nature, and is known under the name of "black jack," or zinc-blende. The black colour of the blende is due to some impurity, sulphide of zinc being nearly white. "Black jack" is a black metallic body, formerly much despised and thrown away, but of late years has been used as a source of zinc. By roasting sulphide of zinc in a fine state of division, with free access of air, we can burn off the sulphur, and at the same time form oxide of zinc. Besides this "black jack," the other chief ore of zinc used in this country is "calamine," which is a compound of zinc and carbonic acid; by roasting that, too, the whole of the carbonic acid is expelled, and oxide of zinc formed. Thus, in all cases the process of extracting zinc is practically by the reduction of its oxide. The calamine, when pure, contains 22 per cent. of metallic zinc, and the black jack 67 per cent. Coke-dust is usually employed for the reduction, though coal would do. There are several methods, but I shall describe only one, and that is known as the Belgian process, because first introduced into Belgium, and it is now largely used in this country. The furnaces employed are of large dimensions; the zinc is heated in long round fire-clay cylinders, not unlike those that the glass-bead makers use. The furnace contains a large number of these cylindrical pots, the front part of the furnace being made up chiefly of their round ends. The furnace itself is a narrow upright chamber, arched over at the top, with a fire-place running from end to end. The interior should be made of good fire-brick, as it has to sustain a high temperature. At the back wall of the furnace are a large number of ridges, on which rest the closed ends of the above cylinders, the open ends of these retorts being in front, and rather lower than the ends at the back. In front they rest upon fire-bricks, supported on iron shelves; and at intervals there are partitions of fire-brick, dividing the front of the furnace into a number of compartments. At the top of the furnace are three openings, or flues, connected with one central stack, the use of the three being to keep the heat as uniform as possible. All the front of the furnace is filled up with the open mouths of these pots, the spaces between them being stopped up with fire-clay. The furnace being now heated up to the right degree, the next thing is to charge it, the charge being the roasted ore (calamine or blende) reduced to powder, and mixed with coke-dust. A receiver, or clay nozzle, is inserted into the mouths of the retorts, and the whole is made tight by plastering with clay. To the end of the receiver an iron vessel, somewhat like an extinguisher, but open at both ends, is fastened, to condense as much as possible of the volatilised metal which has not been already condensed in the receiver, and even then a portion passes out. The charge is introduced just before the "extinguishers" are fitted on, by means of long-handled iron ladles, having at each end a narrow scoop; the workmen go from pot to pot, charging in this way each pot in succession. The fire is made up well, taking care that all the interstices are well stopped with clay, and the fires must be so adjusted that the gases inside the furnace may be somewhat under pressure, so that if a hole should be made the flame would burst out and no air enter; cold air introduced into the furnace would crack the vessels, and the charge would be lost. The process of reduction will now take place, the products of combustion being two—carbonic oxide and vapour of zinc. These two products continually travel forward, the zinc for the most part being condensed in the clay receivers, some more in the extinguishers, together with a small quantity of oxide of zinc; a small quantity passes out with the carbonic oxide gas at the mouths of the vessels, the carbonic oxide burning with its characteristic blue flame, more or less tinged, however, with a small quantity of oxide of zinc. The workmen travel backwards and forwards continually in front of the furnace, with rakes and ladles, by which means they draw out 2 or 3 lbs. of metallic zinc at a time.

UTILISATION OF WASTE STEAM.

Mr. SPENCE exhibited to a distinguished audience, at Stafford House, a plan by which he proposes to employ the heat of waste steam as a substitute for fuel. This method is founded upon a discovery made by the father of the inventor, and announced by him to the British Association at its meeting at Exeter in 1869. The discovery was that steam liberated at atmospheric pressure—that is, at a temperature of 212°—and passed into any saline solution having a boiling temperature higher than that of water, would raise this saline solution to its own boiling point. Thus, as Mr. Spence showed experimentally, if we take a solution of nitrate of soda, which boils at 250°, and if we blow into that solution steam at 212°, the temperature of that solution will be raised to 250°, the steam being condensed and yielding its heat. The explanation seems to be that the salt has a stronger affinity for the water in the steam as water than the heat has for it as vapour. The water is, therefore, seized by the salt, and the latent heat is evolved as heat of temperature. A single cubic inch of water made into steam at 212° will raise 6 cubic inches of water from 32° to 212°, which shows the enormous amount of latent heat that steam contains. In utilising the exhaust steam (at 212°) from a high-pressure engine, Mr. Spence brings it into contact with a solution that has a boiling temperature higher than that of water. For this purpose he prefers to use a solution of caustic soda, on account of its high boiling point, and because it is not liable to act injuriously upon iron. The exhaust steam will raise a solution of caustic soda to a temperature of 375° (more or less, according to its density), and the heated solution is then circulated through pipes in an ordinary boiler, and its heat is radiated, for the purpose of generating steam in the place of heat derived from fresh fuel. If the boiler is at a pressure of 80 lbs. the solution will leave it at a temperature of 250°, so that 125° of heat would have been radiated to the water. The solution having been to some extent diluted by the condensation of the exhaust steam, its capacity for heat will be reduced in a corresponding degree; and if steam at 212° were again blown through it, it would not reach the same temperature as before. It is, therefore, passed into another boiler of ordinary construction, where it takes the place of water, and is concentrated by steam being generated from it. In this way its original capacity for receiving heat is restored. Besides this method of utilising the waste steam of high-pressure engines, Mr. Spence has found the principle equally applicable, and with even greater advantages to the condensing engine. The solution may be brought in contact with the exhaust steam in an ordinary surface condenser. A partial vacuum is produced, because, although the injected solution may be of higher temperature than the steam, its absorbing power of heat is in the same ratio as that of cold water to steam. The solution is again heated to a degree capable of generating steam, and the vacuum is produced. Mr. Spence maintained that if, by taking advantage of his father's discovery, a mode of utilising the large amount of latent heat contained in the steam now thrown into the atmosphere could be brought into practical operation, so that this latent heat could be made to do actual work, the discovery, especially at the present price of fuel, would be one of enormous value, and he announced his intention of speedily trying the experiment on a manufacturing scale. Mr. Crampton objected to Mr. Spence's project that the amount of tubing required for the conveyance of the caustic soda solution would be so large that it would eat up any profits likely to accrue from the discovery, and the audience generally, although the facts proved by Mr. Spence were new to them, seemed little disposed to admit that they would prove to be of any practical value. On this point, however, the larger experiments which Mr. Spence is about to institute must shortly remove all doubt.

SEPARATION OF ORES.—Mr. F. J. KING, of Bishopsgate, has patented an invention, which consists in effecting the separation of ores, such as zinc or copper ores from carbonate of iron, by firstly subjecting the ores or materials to be separated to the action of heat in closed or partially closed retorts, or in any furnace in which air is practically excluded during the roasting process, whereby the carbonic acid is removed from the iron, the iron being thereby changed to a magnetic state; and then passing the roasted ores over a revolving wooden wheel or roller, on the circumference of which are placed rings of iron or steel, each alternate ring being in contact with the opposite poles of a number of magnets inserted in the wheel or roller; a continuous band of silk or other textile fabric, or any material through which the magnetic power will pass, being passed around this wheel

by means of a second wheel or roller, or other convenient arrangement, drawn away from contact with the magnetic wheel or roller for a short distance during its revolution. The ores prepared as above described being passed through a hopper, or otherwise passed upon the band around the magnetic wheel or roller, the magnetic particles are carried to the point where the band leaves the magnetic wheel or roller, and then drop into a receptacle for the iron, while the non-magnetic zinc, copper, or other ores or substances fall from the band into another receptacle.

MR. ALEX. McDONALD, M.P., ON HIS ELECTION AS A MEMBER OF THE HOUSE OF COMMONS.

A special meeting of the delegates of the miners of Scotland was held on Monday, in Allan's Temperance Hotel, Glasgow. Mr. DRINNAN was called to the chair.

The reports from the various districts were first given in. From these it appeared that a movement is in progress for defraying Mr. McDonald's election expenses. The men of Larkhall have voted 100% for this purpose, the men of Ambank, 10%, and in the Maryhill district it had been agreed to give a contribution of 1s. per man as a special levy.

Mr. McDONALD, who was received with loud cheers, then addressed the meeting. Having expressed the pleasure he felt in meeting the delegates, he said that pleasure was enhanced by the fact that he stood before them for the first time in an entirely new position, a position to which thousands had aspired, and had not been able to attain it, a position which was a proud one to them; to the influential merchant, or to the man who devoted his political life. A brief review of matters as they now stood might not be inappropriate. Seventy-five years ago, or thereby, the chains of virtual slavery were struck from the miners of Scotland, but though their chains were broken there was a long interregnum, if he might so speak, during which a very low order of things prevailed. This condition had not passed away when he was thrown upon the scene. Impressed with the evils which existed, from having suffered under them, from his early years he devoted his life to their amelioration. Since that time the miners had risen with an elasticity unequalled by any portion of the community. These changes had to a great degree been brought about by his own exertions. (Applause.) The platform, the House of Commons, the Legislature generally had heard the complaints of the working miners. Parliament had legislated thereon, and now it was the proud position of the working miners of this country that one who had identified himself, who to this hour identified himself, and who, to the last hour of his political life was likely to identify himself, with their cause, had now a seat in the House of Commons. But his pleasure was not alone connected with the Scotch miners—it extended to a much wider area. Many years ago, when the condition of the miners of England was in hopeless confusion, his voice was heard amongst them. Not more than 3000 men were then organised, and these men were in little knots and small communities. Through the efforts of himself—could he venture with a little egotism to say, or would he put it, through the efforts of himself and others—the little ones had become thousands and tens of thousands, producing a result on the state of society and the trading interest of the country which the most fantastic dreamer could not have thought of 10 years ago. He was pleased and delighted that the honour was not one conferred on the miners of Scotland alone, but that an equal honour had been conferred on the miners of England. Mr. Burt, returned so triumphantly for England, had been his pupil from the time he first entered public life. In all difficulties he had turned to him for counsel; when he found breakers ahead he had asked him how they could be averted, and he assured them that nothing would give him greater pleasure than to enter the House of Commons with one so worthy and so noble.

During the last few years a cry had been raised over all England and Wales for the return of working men's candidates to Parliament. Undoubtedly the working men of this country had a right to have their interests represented, and they would have succeeded in accomplishing this had they stood true to themselves. In a number of places working men's candidates had appeared, but he regretted to say that they had been toppled over one after another, like so many ninepins; and it would be left to the degraded and hard-spoken-of miners, out of all the working men, to return their two candidates. (Applause.) He wished to say further that he owed much, that he owed all, to having been the representative of the miners. It would be well, also, to disabuse the public mind in regard to the position of the town of Stafford. One said he went among his mining—his colliery—friends; another said he had gone among the potters; and another said that he owed his seat to some influence, some mysterious influence, of which he knew nothing. Mr. McDonald went on to explain that he had never been in Stafford, except passing through it on his way to and from London, until he appeared before the committee who put him forward as their candidate. There was not a miner or collier within 20 miles of the town, and his victory was the more honourable on that account. He had no influence in his favour except the influence of a band of honest noble working men—(Applause)—and he need only say that had all parties worked on the side of progress, as did the men of Stafford, there would have been a very different record to-day. In Stafford there were Permissive men, there were Anti-Contagious Diseases men; there were all the elements of discord and confusion which had disturbed so many constituencies; but they sunk all these differences, and as a united phalanx returned a working man's representative by an overwhelming majority. The working men of Stafford deserved the congratulations of working men all over the country.

With respect to his own position among the miners of Scotland it would be very much changed. He would require to be in London for six months of the year. He had been in London for about the same period every year during the last 15 years, but then he had uncontrolled liberty to move about at pleasure. Now, however, he would be bound to attend to the interests of his constituency, and to take a part in the counsels of the nation. He had no wish, however, to break the connection that had so long subsisted between himself and the miners of Scotland. He had, therefore, to suggest that these meetings should take place on Saturday instead of on Wednesday. That would enable him to be present, as he could leave London on Friday night, and return in time to take his place in committees, or wherever else he might be employed, on Monday. In the next place, we were coming to exciting times, and he suggested that a committee of five of the sagest men should be appointed, who should have power to meet on any emergency, and he would be prepared to advise with them on any question that might arise. Then, he hoped it would not be considered that he was a harbinger of evil, but undoubtedly they were on the eve of certain changes in connection with the wages question. He was afraid this could not be much longer delayed, and in consideration of this he suggested that a board of conciliation should be formed for the amicable settlement of such disputes as might arise. Mr. McDonald concluded by expressing the sorrow with which he had learned of the death of Mr. Joe Booth, of Ashton-under-Lyne, who had been for many years one of his trusted lieutenants, who had worked with him during the contest in Stafford, and who had rejoiced with him in his return.

NEW APPLICATION OF GYPSUM.—Gypsum mixed with 4 per cent of powdered marshmallow root will harden in about one hour, and can then be sawn or turned, and made into dominoes, dice, &c. With 8 per cent. of marshmallow the hardness of the mass is increased, and it can be rolled out into thin plates, and painted or polished.—*Scientific American*.

NEW FUEL.—PAGLIANI manufactures a combustible mixture to be used as fuel as follows:—Distilled petroleum, 20 kilograms; resin, 30 kilograms; coal dust, 40 kilograms; charcoal dust, 30 kilograms; sawdust, 6 kilograms; sulphate of calcium, 10 kilograms.—136. The resin is dissolved in the petroleum, heated to about 70° by steam, then the other substances added gradually. After thorough mixture the whole is run into moulds: 25 parts of crude petroleum may be used instead of 20 of distilled petroleum. The calorific value of this combustible is said to be twice or three times that of coal.—*Les Mondes*.

ANTI-LUBRICATIVE BEARINGS.—At the machine-works of Messrs. Dolanski, of Vienna, there has lately been tried a new bearing requiring no lubricant. Testimonials from that firm show that a bearing placed in position on Aug. 24 was on Dec. 25, after an interval of four months, in perfect order, no detrimental change having taken place, the axle being bright and running smoothly without any grease or oil. This invention of Mr. Cohn is patented in this country by his agent, Mr. Soul, and is about to receive a trial at the machine-printing works of Messrs. Waterlow and Sons. We shall have pleasure in noting the results.—*Journal of the Association of Foremen Engineers and Draughtsmen*.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

GIPPSLAND TIN MINING COMPANY (Limited).—Capital 100,000*l.* in 50 shares. To purchase and work mines in the Colony of Victoria. The subscribers (who take one share each) are—W. T. Trower, Holland street, Blackfriars; H. N. Tivy, Myddleton Cottage, Clerkenwell; John Jones, Grosvenor road, Highbury New Park; H. J. Goddard, Albion road, Dalston; W. Allen, Oxford terrace, Acton; C. E. Allen, 13, Manor Villas, Richmond; R. H. Kinneer, 9, Milk-st., E.C.

BIRCHGROVE GRAIGOLA COLLIERIES (Limited).—Capital 75,000*l.* in 20*l.* shares. To acquire the above collieries, the locality of which is not mentioned. The subscribers (who take one share each) are—George Bower, St. Neots; S. E. Illingworth, Norfolk crescent, Hyde Park; S. Cheingen, 95, Bishopsgate street; Thomas Jeyls, 3, King street, Cheapside; C. M. Sterman, South Shields; J. R. Ross, 61, Moorgate street; G. H. Hopkinson, 3, Regent street.

LISBON STEAM TRAMWAYS (CITY EXTENSION) COMPANY (Limited).—Capital 30,000*l.* in 2*l.* shares. To carry out the concessions granted to the Lisbon Steam Tramways Company (Limited). The subscribers (who take one share each) are—R. W. Hanbury, Christchurch; C. A. Roberts, Union Club; R. W. Gardiner, 45, St. George's square; W. H. Duke, 41, Regent's Park road; L. Keith, Union road, Tufnell Park; F. Wood, Pellatt Grove, Wood Green; W. White, Addisoncombe.

THE LIGHT CABLE TELEGRAPH COMPANY (Limited).—Capital 350,000*l.* in 10*l.* shares. To construct a light cable from the United Kingdom to the Azores, and thence to Halifax. The subscribers (who take one share each) are—G. F. Smith, Golden square; F. J. Holland, Upper Norwood; M. Carmichael, Finsbury place, Regent's Park; S. Laurence, 13, Cophall-courts; F. C. Marval, Pelham place; W. and W. Morris, Elmwood road, Croydon.

LUTON BREWERY COMPANY (Limited).—Capital 100,000*l.* in 10*l.* shares. To acquire and carry on a brewery business at Luton. The subscribers are—L. C. Hays, Hertford; W. Phillips, Luton; F. Scargill, Luton; H. E. Gordon, Prestons, Kent; J. Ross, Broad Oak, Essex; C. R. Jagg, 110, Cannon street; J. V. H. Irwin, Rosobell Gardens, N.W., 20.

EUROPEAN WORKS COMPANY (Limited).—Capital 50*l.* in 10*l.* shares. To construct public works in any part of the world. The subscribers (who take one share each) are—J. Samini, 24, Great Winchester street; E. Higgins, 2, East India Avenue; W. Sincilar, 2, East India Avenue; C. Leonins, 24, Great Winchester street; Charles Burt, 2, Great Winchester street; H. Waite, 30, St. Ann's road, New Wandsworth; and R. J. Garwood, Tufnell road, Camden, well.

LONDON AND PROVINCIAL BOILER INSURANCE COMPANY (Limited).—Capital 40,000*l.* in 1*l.* shares. To transact business as an insurance company against boiler explosion and risks to machinery. The subscribers are—Dudley de Chair, Nightingale terrace, Wolsley; R. B. Pownall, 3, King street, Cheapside; 100; G. Wailes, 255, Euston road; 300; L. T. Crook, 19, King street, E.C.; 200; J. Ingledew, 191, Bishopsgate street; 5; C. Johnson, 2, Enmore Villas, South Norwood; 5; and W. Darley, Deptford.

IPSWICH AND FELIXSTOWE TRAMWAY AND PIER COMPANY (Limited).—Capital 50,000*l.* in 5*l.* shares. To construct a pier and tramway connected therewith. The subscribers (who take one share each) are—J. McDonald, 136, Southampton row; W. C. A. W. Maherley, Gloucester; F. Gardner, Russell Cottage, Walthamstow; G. Newton, 103, Tufnell Park; J. Dunn, 65, St. Clement's House; J. Field, 17, Exeter Hall; and J. McDonald, 136, Southampton row.

THE THAMES AND GENERAL LIGHTERAGE AND TRANSIT COMPANY.

Our attention has been called to the development of this association, which will achieve a most important object when its work is carried out. The proposal is to adopt steam barges and tugs on the Thames in the first instance, and afterwards on other rivers, so as to supersede the present slow and cumbersome vessels used for river transit, which, from the time they consume and their lumberly awkwardness, cause much inconvenience to ship-masters and merchants. The scheme is a novelty; but, *prima facie*, it bears all the aspect of a practicable and useful proposal. The prospectus is too late for insertion in this week's Journal, but will appear *in extenso* in our next issue, and will clearly prove the great necessity for this association, and the absolute certainty of success. There are but two barge companies connected with the Thames transit service, and these are engaged by two commercial firms, and great delays are of every-day occurrence from the insufficiency of the supply, as the service is at the mercy of wind and tide, and the caprice of a number of owners of it, may be but a single barge.

Notwithstanding these difficulties, the profits made by barge-owners amount to 50 and 60 per cent. on the capital employed. There can, therefore, be no doubt whatever that an energetically worked and intelligent steam-barge company will realise still greater profits. A fleet of barges has been already secured, and the demand for their services is such that were the whole capital of this company employed it would not suffice for the existing requirements upon the river, especially upon the improved system of operations which the company will pursue.

The management of this steam fleet will be confided to Mr. Kemp, whose energy and experience are of a high order, and well known and appreciated. He is himself a bargeowner, having commenced with one, and his success has been such that he possesses a fleet of between 50 and 60.

It is to be recollected that the business on the river of this nature is rapidly on the increase; London is the great port for the import of produce, and last month such import was 4,000,000*l.* more in value than in the corresponding month last year. We shall call attention to the salient points of the prospectus when it appears in our columns next week.

MINING NOTABILIA.

[EXTRACTS FROM OUR MINING CORRESPONDENCE.]

PERRAN CONSOLS.—This mine sold on the 6th inst. 3 tons 15 cwt. 2 qrs. 19 lbs. of black tin, being 1½ ton more than the sale of last month, owing to the improvement in the 40, cast of flat rod shaft, which is worth 25*l.* per fathom. The mine is looking well and increased returns are ensured.

THE OLD TREBURNING MINE has commenced the new year well by raising 53 tons of silver lead ore, and selling the same for the sum of 177*l.* 14*l.*, being an increase over the last sale of 2*l.* per ton, notwithstanding the depression in the metal market. The balance sheet, which has been issued and circulated among the shareholders previous to the ordinary general meeting to be held on the 17th inst., proposes to capitalise the expenditure made in the development of the mine to June 30, 1873, and from that date the accounts show a clear profit on the last six months' working sufficient to pay a dividend at the rate of 17 per cent. per annum on the preference shares, and 7 per cent. per annum on the ordinary share capital, leaving a balance of 213*l.* 8*l.* 10*d.* to be carried forward to the next dividend account, together with the substantial profit on the sale of ore mentioned above; and also a cash balance of 136*l.* 10*l.* 6*d.*, to be carried forward on capital account. Captains Wm. Hancock and Bryant report that they expect to considerably increase the returns of ore during this year; if so, and as there are no debts outstanding, only the current monthly accounts, the position of the mine, financially and otherwise, is second to none in Cornwall or elsewhere.

GUNNISLAKE (Clitters).—As I predicted, the cross-course in the bottom end has cut off the ore, which has been the case generally, so that our first of ore can be but a few fathoms in length. However, almost every point of it is laid bare, and we shall be stopping from it in every conceivable manner—either from back, sides, or underneath; this will give a spur to the sampling. The shaft, of course, is to be sunk at once, to make pits for the pumps, which are near at hand.

CREBOR.—It seems the great and long-reported course of ore in the 120, by last week's report, is more a matter of capels than ore: has not this long been the case? It is cheering, at last, to find the executive alive to the fact. Would it not pay the shareholders much better to drive the 120 in the lode, which is said to be 5, 6, or 7 ft. wide, than drive first a costly level by the side of the lode, with the cost of tramming little near 200 fathoms, then draw it through the shaft 120 fathoms, then pay land-damages to the Duke for deposit, &c., and, finally, pay 18*l.* or 20*l.* per fathom to take down the lode and send it to surface?

THORNHILL REEF.—The last advices from this mine were most satisfactory. In stopping the levels gold could be plainly seen in the mine. Crushing has commenced, and a telegram is hourly expected announcing the result of the first clean-up. With its new machinery, lately erected, which is capable of crushing 300 tons of quartz per week, and with such rich stone, the company cannot fail to be a success. Even with poorer stone a trial crushing which was made some time back gave over 2*l.* per ton profit, and as the capital is only 20,000*l.*, the dividends promise to be very handsome.

GLAN SEVERN.—The lode in the adit level, which has been of a most favourable character all along, continues as before, while the lode in the engine-shaft is very promising. The shaft has been sunk 7 fms., and it is intended, when a few more fathoms are gained, to drive towards the ore ground discovered in the adit. The lode here operations are now being carried on is that known as the Pant-Mawr, which in the celebrated mine of that name has proved so profitable.

COOK'S KITCHEN.—The quarterly meeting was held at the mine on Thursday, the purser, Mr. Walter Pike, occupying the chair. The tin sold, less dues, realised 347*l.*, and a debit balance of 143*l.* was shown, which included the debit balance of 985*l.* at the last meeting. To meet this it was resolved that a call of 10*l.* per share should be made, and it was also resolved that application should be made to the lord, Mr. G. L. Basset, for a reduction of dues during the present depressed state of mining. The manager and agent's report was favourable.

WEST FRANCES.—The quarterly meeting was held on Thursday, Mr. Walter Pike, the purser, presiding. The accounts were:—To labour costs for four months, ending Jan. 3, 292*l.*; merchants' bills, 122*l.*; bank charges, six months, 38*l.*; balance from last account, 1480*l.*; total, 566*l.* Cr.:—By tin sold, about 60 tons, 3498*l.*; less lords' dues, 219*l.*; total, 3724*l.*; South Frances Encroachment, second instalment, 437*l.*; Total credits, 4161*l.*. Balance against the shareholders, 1801*l.*. From these accounts it will be seen that four months' labour costs have been charged against three months' returns. This is owing to the four-weeks

month system of pay; but for the thirteenth month a profit would have been shown of 200*l.* on the three months' working. It was resolved, "That application be made to the lords for a reduction of dues during the present depressed state of mining." The manager and agents, Capt. J. Thomas, H. Rubing, and W. Rowe, reported on the mine.

WHEEL BASSET AND GRYLLS.—The general meeting was held at the mine on Friday, Mr. J. Walker Tyacke presiding. The accounts showed a debit balance of 1344*l.* 8*l.* 7*d.* A call of 7*l.* 6*d.* per share was made. The agents, Capt. Wm. Oats and Paul Prisk, said they were now able to nearly meet the expenses of the mine, notwithstanding the low price of tin and the high prices of materials. Their report was satisfactory; they had sold during the 20 weeks nearly 50 tons of tin ore, at an average price of 64*l.* 6*l.* per ton, being 5*l.* 3*l.* 10*d.* per ton less than last time, and amounting to 2592*l.* 16*l.*. They had employed 110 men, 44 boys, and 30 girls. [The survey for four weeks being held the same day, all the bargains and tribute pitches were re-set at about the former prices, with the exception of the 15 fm. level east, which was set at 7*l.* 10*l.* per fathom; and Eathorne shaft, to sink below the 15 fm. level, by nine men, at 12*l.* per fathom.]

ENGLISH AND AUSTRALIAN COPPER COMPANY.—At the meeting of shareholders to be held on Thursday next the directors' report will show that the gross quantity of ore, regulus, precipitate, and rough copper received from various mines during the year ending June, 1873, was 10,979 tons 8*l.* cwt., against 6564½ tons in the previous year. The quantity smelted at the Port Adelaide works was 5002 tons, and at the Newcastle works 4350 tons. The quantity of copper made was 1,618½ tons at Port Adelaide and 492½ tons at Newcastle. The quantity shipped and sold was 208½ tons. The supplies of ores, &c., show an increase of nearly 4500 tons, as compared with the previous year. The deliveries to the company from the Burra Burra Mine have continued to increase, amounting to no less than 2945 tons, against 1449 tons in the previous year; and the prospects of the future, as set forth in the last report presented to the shareholders at the general meeting at Adelaide on Oct. 15, were highly encouraging. In reviewing the operations of the English and Australian Company for the year ending June 30, it is satisfactory to observe that the loss sustained in the first six months by the heavy and continuous fall in the price of copper of nearly 19*l.* per ton, has been recovered in the next six months by the saving effected by smelting the low-class ores at Newcastle, and also by the comparative steadiness of the copper market, showing the soundness of the principles on which the business of the company is based. The profit and loss account for the year shows a balance at the credit of 1953*l.* 3*l.*, to which has to be added 24,448*l.* 15*l.* 10*d.*, balance at credit on July, 1872; making together the sum of 26,401*l.* 8*l.* 10*d.*. From this sum the 21st and 22nd dividends, amounting to 17,500*l.*, have been paid, and there now stands at the credit of profit and loss 6777*l.* 8*l.* 10*d.* available for dividend. Out of this amount the directors recommend a dividend at the rate of 1*l.* 6*d.* per share, with the usual addition to the reserve fund. The reserve fund, which last year amounted to 6848*l.* 2*l.* 10*d.*, is now increased to 9010*l.* 19*l.* 10*d.*, secured by copper warrants.

FORTEQUE.—At the special meeting, on Wednesday, the question of increasing the capital of the company was adjourned until the general meeting. [For remainder of Meetings see to-day's Supplement.]

OLD WHEAL FRIENDSHIP.—We hear that the materials, plant, &c., have been purchased by Messrs. Lanyon and Co., and most probably will be offered for sale before long.

MINING IN NORTH CARDIGANSHIRE.—In the Journal of the past two weeks I have seen some remarks upon mining in this district, and allusion has been made to Tan-y-Alit Mine. Some twelve months ago I gave my opinion upon the prospects of this property, which was formerly known as the North Allt-y-crib Mine. It was worked under the last named title for several years, and was ultimately abandoned on account of its non-productiveness. I think it would be very wise on the part of those who have invested, or are about to invest, in this undertaking to visit the mine themselves, or to employ a competent and reliable man to inspect and report upon it for them, as, in my opinion, misrepresentations have been made as to its worth. The only one (a very unproductive) lode in this property, commonly termed the north and south lode, with small branches running at right angles, making short deceptive deposits against the cross lode.

COPPER ORES.

Sampled Jan. 21, and sold at Tabb's Hotel, Redruth, Feb. 5.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
West Tolgus	73	£4 4 6	East Pool	42	£3 16 0
ditto	71	0 7 6	West Basset	37	£4 13 0
ditto	70	0 7 6	ditto	37	7 7 6
ditto	69	4 5 0	St. Aubyn United	37	3 15 0
ditto	60	4 7 6	ditto	31	6 10 0
ditto	56	4 4 0	Wheal Seton	34	4 5 6
ditto	50	5 2 6	ditto	33	4 5 6
Cronver and Abraham	46	4 2 6	East Grenville	46	1 19 6
ditto	55	6 6 6	ditto	20	5 15 6
ditto	51	7 19 6	South Dolcoath	32	5 15 6
ditto	42	3 6 6	ditto	24	4 4 0
ditto	39	4 7 0	Wheal Basset	28	5 7 6
ditto	35	7 19 6	ditto	26	10 12 0
ditto	34	9 3 6	East Seton	50	2 12 6
South Wheal Crofty	49	1 17 0	Wheal Buller	19	5 19 6
ditto	48	2 16 0	ditto	6	13 10 0
ditto	41	1 14 6	New Dolcoath	18	4 7 0
ditto	38	2 2 6	Burra Burra	14	1 11 0
ditto	28	3 1 0	New Rosewarne	13	3 7 0
West Seton	62	4 6 6	North Roskear	10	8 1 0
ditto	57	3 17 0	South Frances	3	0 0 0
ditto	60	3 10 6	ditto	2	4 0 0
East Pool	60	2 14 0	West Gorland	5	6 10 0
ditto	48	1 16 6			

TOTAL PRODUCE.

West Tolgus	440	£2087 5 0	Wheal Basset	74	£426 2 0
Cronver & Abraham	342	2009 14 6	East Seton	50	131 5 0
South Crofty	294	461 18 6	Wheal Buller	25	188 1 6
West Seton	179	490 4 6	New Dolcoath	18	78 0 0
East Pool	140	409 4 0	Burra Burra	14	21 16 0
West Basset	82	483 5 0	New Rosewarne	13	43 11 0
St. Aubyn United	68	340 5 0	North Roskear	10	50 10 0
Wheal Seton	67	286 8 6	South Frances	5	26 0 0
East Grenville	66	206 7 0	West Gorland	5	32 10 0
South Dolcoath	56	284 16 0			
Average standard	£93 15 0	Average produce	7½		
Quantity of ore	1848	Quantity of fine copper	142 tons 5 cwt.		
LAST SALE.—Average standard	£97 3 0	Average produce	7		
Standard of corresponding sale last month	£96 16 0	Produce	6¾		

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Vivian and Sons	393	£1805 0 0
P. Grenfell and Sons	269	1369 14 0
Neill, Druce, and Co.	381	1522 19 0
Williams, Foster, and Co.	376	1796 11 0
Mason and Elkington	290	1066 14 6
Sweetland, Tuttle, and Co.	172	696 11 0
Total	1848	£8257 9 6

NO SALE on Thursday last, Feb. 12.

Copper Ores for sale at the Royal Hotel, Truro, on Thursday next.—Mines and parcels.—South Caradon 419—Marke Valley 314—Hingston Down 252—Glasgow Caradon 250—Gunnislake (Clitters) 197—Bedford United 186—East Caradon 145—Wheal Russell 95—Phoenix 80—Duchey Great Consols 54—Wheal Friendship 16—Tin Valley 12.—Total, 2020 tons.

COPPER ORES.

Sampled January 21, and sold at Swansea February 10.

Mines.	Tons.	Produce.	Price.	Mines.	Tons.	Produce.	Price.
Cape Ore	62	£23 1 6	Union	113	5	£2 3 6	
ditto	61	29 23 3 0	ditto	113	5½	2 2 6	
ditto	61	29 23 3 0	ditto	90	45	2 1 6	
ditto	61	29 23 3 0	ditto	65	45	2 1 6	
ditto	62	30 23 18 0	ditto	121	45	2 2 0	
ditto	62	30 23 17 0	Copper Ore	75	7½	4 6 0	
ditto	61	30 23 11 6	ditto	74	7½	4 6 0	
ditto	29	36 28 5 6	ditto	74	7½	4 6 0	
ditto	28	32 30 13 0	ditto	74	7½	4 6 0	
ditto	18	27 21 10 0	Berehaven	128	8½	5 0 0	
ditto	31	31 24 8 6	Furdon	89	3½	1 16 0	
ditto	32	31 24 8 6	Concordia	30	4½	38 4 6	
ditto	49	30 23 14 6	ditto	7	48	37 4 6	
ditto	49	30 23 9 0					

TOTAL PRODUCE.

Cape Ore	748	£18,415 6 6	Berehaven	128	£ 700 16 0
Union	592	1,081 12 6	Furdon	87	148 4 0
Copper Ore	297	1,295 12 0	Concordia Reg.	37	1,847 6 6

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount.
Copper Mines Company	218	£3,515 12 0
P. Grenfell and Sons	90½	2,245 8 0
Neill, Druce, and Co.	270½	2,584 0 6
Vivian and Sons	361	5,017 16 0
Williams, Foster, and Co.	559	5,143 11 0
Charles Lambert	37	1,347 6 6
Ravenshead Copper Company	67	1,438 1 6
Sweetland, Tuttle, and Co.	182	1,857 2 0
Total	1779	£22,968 17 6

NO SALE on March 3.

TOTALS AND AVERAGES.

Whole sale	21 cwt.	Produce.	Price.	Per unit.	Standard.
1779	17½	£12 18 3	148.91	£96 2 0	

PETROLEUM.—The value of petroleum imported in the last month had reached to 120,944*l.* in the like period of the preceding year it was only 25,888*l.*

FOREIGN MINING AND METALLURGY.

At the last public sale at Rotterdam tin was depressed by speculative operations, and Banca declined at one time from 70½ *fls.* to 68 *fls.* This latter price provoked, however, rather a regular demand on the part of consumers, who profited from the fall in order to purchase at the reduced price. Some rather important transactions resulted, and a revival in business accordingly appears probable. Billiton tin has been rather firmer at about 68 *fls.*, and there have been comparatively few sellers. The disposable supply of Banca and Billiton in Holland at the close of January was 61,345 ingots, as compared with 35,909 ingots at the close of January, 1873, and 45,378 ingots at the close of January, 1872. The price of Banca in Holland at the close of January was about 20 per cent. lower than at the close of January, 1873. At Paris, Chilian copper in bars at Havre has made 87*l.* per ton; ditto in bars at Paris, 87*l.* per ton; ditto in ingots, 92*l.* per ton; and English tough cake, 92*l.* per ton. At Rotterdam, Drontheim has brought 50 *fls.* to 52 *fls.*; and Russian crown, 51 *fls.*. French lead, delivered at Paris, has made 23*l.* 12*l.* per ton in that capital; Spanish ditto, delivered at Havre, 23*l.* 8*l.* per ton; English ditto, delivered at Havre, 23*l.* 4*l.* per ton; and Belgian and German ditto, delivered at Paris, 23*l.* 8*l.* per ton. Stobberg lead has been quoted at Rotterdam at 14½ *fls.*; Spanish at 14½ *fls.*; and German of various marks at 14½ *fls.*. Silesian zinc, delivered at Havre, has brought 27*l.* 4*l.* per ton at Paris; other good marks, delivered at Havre, 27*l.* per ton; and ditto, delivered at Paris, 26*l.* 16*l.* per ton. The quotations for Silesian at Amsterdam has been 13 *fls.* to 13½ *fls.*.

In the French coal trade transactions have been of no great importance, and prices have been quietly falling. What has most occupied public opinion for the moment has been the voting of new taxes, and especially the additional 10 per cent. proposed to be imposed on quick train railway traffic. The industrial world appears to be unanimous in deploring this new charge, which is almost ruinous for some industries, and oppressive for all, although operating very unequally. The results, it is feared, of such an additional tax can only be unfortunate, and some vigorous observations have been made upon the subject by industrialists of the Loire group. The Committee of French Forgemasters has completely endorsed these observations, and the Budget Commission has also shown itself opposed to the new tax. There are still some apprehensions, however, as to the final result. A report has been prepared by M. Ducarre upon the official enquiry into the coal supply question which was ordered some time since in France; the crisis which provoked the enquiry is regarded, however, as past and gone. A normal state of affairs is slowly returning, and comparatively little interest is now taken in a difficulty the effects of which are no longer felt—at any rate to the full extent. There is very little change to report for the moment in the French coal trade or in the general tone of prices; the fall has become more decided and is even extending, and all the more readily as comparatively little business has been doing. In the Nord concessions have been more freely made, especially in the case of contracts of some importance.

There can scarcely be said to be any amelioration at present in the aspect of affairs in connection with the French iron trade. The general tone of business is one of discouragement, and there are frequently very considerable margins between published quotations and actual selling prices. Merchants' iron has been quoted at 10*l.* 16*l.* per ton upon the Paris market, and at 10*l.* to 10*l.* 8*l.* per ton in the Haute-Marne and in the Nord; in important transactions, however, lower terms would be accepted. It begins to be time for the present state of things to terminate, as metallurgical industry has been rather too severely tried. M. Tessié-du-Motay has been experimenting at Terrenoire with mixtures of iron and manganese. Referring to experiments of this class, M. Jordan, in his inaugural address as President of the Institution of Civil Engineers, recently characterised metallurgy as an

per ton for one lot. The same company also tendered for another lot at 9s. 14s. 10d. per ton. The Couillet Company tendered for one lot at 9s. 16s. 8d. per ton, and for another lot at 9s. 19s. 8d. per ton. A royal Belgian decree authorises M. Lambert to establish ironworks at Marcinelle. The Northern and Eastern of France Mines and Ironworks Company, with which the Acoz Forges Company proposes to amalgamate, was formed with a capital—that is a nominal capital—of 240,000l., represented by 12,000 shares of 20l. each. The shares are all subscribed for, and they are paid up to the extent of 50 per cent. The company possesses a rolling-mill at Trith, St. Leger; a blast-furnace at Nancy, as well as a second in course of construction; and, finally, some important mining concessions. The Acoz Company is assured work for the whole of this year, and it is not proposed that the amalgamation shall take place before May 1, 1875. Coal continues to fall in Belgium, but it still stands above the level at which Belgian industrialists would wish to see it. Ordinary coking coal has made 16s. per ton in the Charleroi basin. At Liège the state of affairs has not become more animated; on the contrary, sales are effected with difficulty, and stocks have been increasing, although all possible concessions have been made. The extraction is being reduced within the narrowest possible limits; miners' wages are also being cut down. The imports of coal into Belgium amounted to 590,000 tons, against 183,000 tons in the corresponding period of 1872. In the augmentation of 407,000 tons indicated by this comparison, England figured for 110,000 tons, and the Zollverein for 200,000 tons. The exports of coal from Belgium declined, on the contrary, from 4,300,000 tons in the first eleven months of 1872 to 3,900,000 tons, showing a falling off of 400,000 tons. The exports of Belgian coal to France in the first eleven months of last year showed a falling off of 150,000 tons, and those to Germany and the Low Countries a falling off of 200,000 tons. A letter from Liège states that a price of 16s. per ton has been agreed to by one local coalowner in a rather long contract.

FOREIGN MINES.

ST. JOHN DEL REY MINING COMPANY (Limited).—Advices received Feb. 4, 1874, ex Ebro:—

Morro Velho, Dec. 29, 1873.—PRODUCE FOR SECOND DIVISION OF DECEMBER: The produce obtained during the second division of December, being a period of 14 days, amounts to 4995 2 oits. It has been derived as follows:—

	Oits.	Tons.
Mineral from mine	3903 6	from 901 yield 6 4/8 per ton.
Re-treatment Morro Velho arrastres	150 5	
Prata	39 1	
Total produce	4095 2	oits.

The above is the best return we have obtained since we have reached the lode, and appears to be a better recovery of the gold contents than that advised by previous mail. Under present circumstances it may be considered a satisfactory gold return from the mineral reduced.

Advices received February 13, per steamship Boyne:—
Morro Velho, Jan. 17.—GENERAL OPERATIONS: Since I had last the honour of addressing you our work has been carried on with great regularity, and very good daily has been done in the several places where our operations are being conducted. Both in the excavation, in the level and shafts, and at the reduction works we have been free from interruption, and having adequate force the work has been well performed.

PRODUCE FOR DECEMBER.—The entire produce for the month of December amounts to 19,076 oits, equal to 1141 599 ozs. troy. It has been derived as follows:—

	Oits.	Tons.
From mineral from new excavation 8979 oits.	1472	from 1472 tons ore = 6 3/4 oits. per ton.
From re-treatment Morro Velho	485 5	
arrastres	122 7	
From Prata	88 8	
From Gaia Mine	—	—
Total produce	19,076	oits.

The foregoing produce may be considered a large return for the month, when it is remembered we only reached the lode on Oct. 7, and that we have only had one kiln employed in handling the mineral from the formation through the shaft A. The yield per ton is better than was obtained in the month of November.

COST AND PROFIT.
The produce as above being 19,076 oits.
Less loss in melting 31 8
19,044 2 oits. at 8s. per oit. = £4017 13 7

The cost, less sums received from the
Road contracts Rs. 39,241 8527 at exchange 264 = £3924 3 0
Profit for December = £93 10 0

NEW SHAFTS.

The costs in December for timbering, pump work, driving level, and surface work, amounted to Rs. 6492, \$380, at exchange 264 = £703 8 1

The outlay is heavy, owing to the costs of the new plunger sets of pumps erected in December, and the completion of the rods, cistern, and other timber work in the shaft A. This plunger is complete, and is working well.

The **MINES** include the sinking of the shaft A within the excavation, the stopping, driving east and west at the ends of the lode, and the strong timber-work erected for a new shaft, for the protection of the bore in the excavation.

Considering the very short time we have been opening on the lode, its hard and tough nature, and the difficulty there has always been in penetrating it, we may consider it very creditable that in the second month after reaching the excavation, and with the limited hauling medium we are obliged to use at present—only one kiln through shaft A—the mineral raised and produce extracted may altogether be regarded as very satisfactory.

MIXED WORKS.—The main points have been given in previous advices, and full details will be found in the monthly reports.

From the measurements made yesterday the sinking, driving, and extending of the excavation during the first 15 days of January are shown to be as follows:—

The shaft has been sunk 1 ft. 2 in. 6 in., or 190 fms. 9 in. 1 in. total depth. The level in shaft B towards the lode has been driven 1 ft. 6 in. 3 in.; total length, 3 fms. 0 in. 9 in.

The excavation in the lode now measures as follows:—

Length from east to west	9 fms. 4 ft. 0 in.
Width at eastern end	2 3 0
Width at western end	5 0 0
Height of roof from bottom of the shaft	5 4 11
Depth of sump from the bottom of shaft	4 3 0

This gives plenty of space and height to admit of another stop being taken off, and thereby increase our quarrying operations and stopping facilities.

REDUCTION DEPARTMENT.—The spalling has been carried on regularly, and the stamp passes kept well supplied with the broken ore for reduction, the Herring and Colson mills and 12 heads of the Powle's being kept employed in pulverising the mineral.

GOLD EXTRACTED TO DATE.—The produce extracted from the mineral stamped and the sand re-treated during the first division of January, a period of 11 days, amounts to 4884 8 oits., equal to 540 081 ozs. troy. It has been derived as follows:—

	Oits.	Tons.
From mineral from the excavation	4443 8	from 614 tons of ore = 7 3/4
From re-treatment by arrastres	241 0	= 0 391
Total	4684 8	= 7 628

The above is the best produce and highest yield we have yet extracted since reaching the lode. The health of the establishment is good.

DON PEDRO NORTH DEL REY.—Report for December: Produce 4869 oits., 2069l. 6s. 6d., cost, 3014l. 12s. 1d.; loss, 945l. 6s. 7d. We deeply regret to have to report of low returns, but we do not wish to hope that, when the adverse circumstances with which we have had to contend are remembered, they will be received as the best that could be obtained.—First Division of January, 1874: Produce weighed to Jan. 16, 2178 oits. The ore obtained this last fortnight has again been derived from the original sources—Canoa and No. 6 and No. 8 shafts. A small quantity of moderate quality boxwork has been taken from the southern shaft in No. 8, descending below the 25, and the stopes generally are improved since last reported on. The water has not been drawn out of the bottom of the mine since the iron rods were fixed, owing to the limited supply of surface water in consequence of the "verano" (Indian summer), but we expect rain again in a few days, which we believe will, by increasing our pumping power, quickly rid us of the extra quantity of water in the mine, and, as soon as this be accomplished, we shall fix the new pumps, after which we hope to continue sinking without any serious hindrance.

ROSSA GRANDE.—Report for December: The cost amounts to 1225l. 19s. 4d., in which an amount of 13l. 8s. 9d. has been charged on account of laying out permanent spalling floors. The daily average of force has been 203 1/2. The produce amounts to 3610 oitavas of gold; profit, 308l. 5s. 8d. Results equal to the above would have been given long ere this had we water to crush the mineral at our command. By classifying the stone from the lode under two separations I have been enabled to make some test of the value of the ore from different parts of the mine.—First division of January: We are proceeding with the sinking of the shaft as fast as practicable, and the richest rocks of ore ever extracted from this shaft are being quarried in the present bottom. I hope by the end of the month to be deep enough to commence the 50 fm. levels, and judging from the present very auriferous nature of the lode there are good reasons for expecting better results from same than at any shallower point. The lode in the bottom of 28 east to the 38 in the course of the next fortnight, after which we shall employ a force in stopping at this point, where the lode is 5 ft. wide, well defined, and of good quality. The ground in the shallow level is become a little harder within the last 3 ft. driving, but we are making fair progress.—Chachira: I have nothing new to report on this mine; the lode has proved to be very bunched at every point we have opened on it.

MINERAL HILL (Silver).—Mr. Oakes, Jan. 19: The ore raised is as before—40 tons, of an average grade of 50 per ton. The weather for the last week was very favourable, we have sorted a good quantity of low-grade ore from the waste dumps by Indian labour.

CHICAGO (Silver).—Feb. 12: Advices have been received here from the manager at Salt Lake City, that the furnace was obliged to stop on Jan. 16, through want of charcoal, the roads being temporarily too bad for transport, but a telegram received at the office on the 12th inst. states that the furnace had started up, and had at the time the telegram was sent been running seven days. A re-

duction of wages, 50 cents per day, had taken place among the miners and furnace hands.

RICHMOND CONSOLIDATED.—Telegram: Week's run, one furnace, \$18,000. In consequence of late severe storm contractors for charcoal unable to supply fuel for more than one furnace this week.

UTAH (Silver).—J. Longmatt, Feb. 2: Telegram: Trial most satisfactory, estimate dress daily 80 tons, producing 20 tons, 70 per cent. lead, 16 ozs. of silver, first cost, 40 cents per ton.

SIERRA BUTTES (Gold).—Sierra Buttes and Plumas Eureka Mines for January—Sierra Buttes Mine: Receipts, \$37,274; cost of mining and milling, \$15,638. Plumas Eureka Mine: Receipts, \$18,478; cost of mining and milling, \$14,450. Prospects better for next month.

EBERHARDT AND AURORA.—The directors have received a letter from Capt. Drake, dated Jan. 10, embodying the following information regarding the development of the North Aurora section of the property.—Central Drift: Completed the east tunnel, and now sinking at the end of that drift with good prospects of coming upon a body of ore. Ridsdale drift now in good ore. The new mill running well. The amount of ore hauled to mill has somewhat increased, but the roads are still very bad. The accounts and report will be forwarded as soon as possible.

EXCHEQUER (Gold and Silver).—L. Chalmers, Jan. 19: The engine-shaft is making good progress. The contractors had worked only two days when they struck a soft seam; I cannot inform you the number of feet made to Saturday on account of the snow, a fresh and heavy fall making the road almost impassable to-day, and I omitted it on Saturday.—North Drift from the 100: At no time since we first opened the lode has it been so promising; we have 3 ft. of solid quartz, 1 ft. of which is good ore. I think 35 ft. behind us will pay to stop, but I cannot well stop driving north, as every foot I go I am laying bare more ore, and on this I am not dependent at present for my mill supply. I am in 235 ft., and have 205 ft. more to run to make connection with the 140 ft. winze from the main tunnel, and I expect that the whole of this will run through pay ore, giving me 240 ft. of good stopping ground, averaging 200 ft. in height, which if only 1 ft. wide will at the ordinary rate of 13 cubic feet of quartz unbroken in the lode to a ton yield 3693 tons—16 tons a day for 230 days. If the lode should come to be 2 ft. wide, then just double, or 16 tons a day for 460 days from this source alone, at 30 per ton profit, \$73,800, or, if only 3693 tons, and 29,400l. If the lode should average 2 ft. wide, I mention these things to show you how important it is to push your development ahead of your extraction, and how little, comparatively speaking, of the lode, if it is all good, it takes to furnish 29,000l. in sterling. I am very unwilling to take the drivers away to stop, because I know I have something good ahead. I proved it when working at the 140 south, and I want to get into it quickly. Some of the ore I got out last week assays \$120, and with ore all the way from \$15 to \$40 and \$50. The schute I am working up to by the north drift and down to by the shaft is the same that made me recommend the purchase of the mine, and of which 2 1/2 tons milled at Reno gave you \$115 8 1/2. Some months after we commenced working, I shall take the engine-shaft down 100 ft., irrespective of the Acozia adit, I consider the depth gained more likely to pay sooner than the connection with the Acozia at the 160, when to make that connection (with ore I mean in the Acozia) I have to run at any rate 330 ft. to even its perpendicular, plus the number of feet it interlays. Had the adit been on the main lode I should have, perhaps, hesitated passing the level of the adit, as one drift would have done for that level, but as I must run drifts on each of the lodes, in any event, I think it is preferable to take all the depth I can at present, and make my levels on the main lode always 100. I only wish I could do both at once. My team stuck to-day half-way to Silver Mountain; will open the road again when it ceases snowing, but, as the Yankees say, there appears to be no "let up" to it.

CAPE COPPER.—The directors have received the following advices by the Northern Railway for fortnight ending Dec. 13, 200 tons up and 430 tons down. Bills of lading are received for 320 tons of ore per Laura, and 290 tons per steamers Roman and America; 730 tons of ore were sold on 10th inst. by public ticketing, at an average of 15s. 7 1/2d. per unit, realising approximately 17,950l.

MENZENBERG.—R. K. Roskilly, Feb. 7: Dickins's Engine-Shaft: The cutting of ground for hearers and cistern in this shaft is nearly completed. We should, however, have had this work finished in the time mentioned in my last report, but having intersected here the east and west lode, met with 3 fathoms below the 23, has somewhat retarded our progress, the ground being harder here than we calculated upon. Nevertheless, when accomplished, all energy will be brought to bear upon the fixing of the plunger lift, so as to set it in motion in as little time as possible. We have no other change to notice.

PONTGIBAUD.—W. H. Rickard, Feb. 2: Roure: The new shaft is holed to the rise in back of the 60. We hope in two months to cut down and timber the rise to the full size of the shaft, and cut plat at that level. The rise in back of the 100 continues in pretty favourable ground.—Virginia's Lode: The 80 metre level north is in stiff wet ground. The lode shows spots of ore. The 60 north produces a little coarse saving work. The winze behind this one is poor. The rise in the 60 south yields 1/2 ton of ore per current metre. The 40 metre level north yields a little orestuff for a width of 2 ft., and the same level south yields 1/2 ton of ore per current metre. The 20 north has entered easy ground, but yields no ore to value. The rise behind this end yields a little saving work. The cross-cut in the 20 south, having met with nothing of value, is suspended. In the adit north the lode where undercut yields 1/2 ton of ore per metre.—Mill Lode: The 20 metre level, south of shaft, has opened a pretty good piece of ore ground, worth 1/2 ton of ore per metre; the present end yields 1/2 ton. The adit south yields a little saving work, of low quality. Our tribute pitches throughout this mine yield well.—La Brouse: The sinking of the engine-shaft below the 100 has gone on very well during the past month. We are now down 20 metres, and hope to sink the fork, and cut the 120 plat this month. The 100 cross cut west continues to traverse boggy ground, at times yielding a little ore. We have set the intermediate level to drive south, which will lay open a pretty good piece of ground. The tribute pitches are without change in yield on the whole.—La Brouse: The 140 metre level south yields stone of ore. The 120 south has entered soft ground, yielding 1/2 ton of ore per metre. The 100 metre level south continues to yield 1/2 ton per current metre. The lode where being undercut behind this end yields 2 tons of ore per current metre. The 80 and 60 metre levels south are poor. The winze in bottom of adit level yields a little saving work. The tribute pitches throughout this mine are again improved, and yield well on the whole. The sinking of St. George's engine-shaft below the 70 metre level makes fair progress. The 70 metre level, north of this shaft, on St. George's lode, yields a little saving work. The same level on main lode yields 1/2 ton of ore per current metre. The same level on eastern part yields 1/2 ton per metre. The 70 south yields a little saving work. The 50 north yields stones of lead ore and blende. The 50 and 30 south are unproductive. Our tribute pitches have yielded tolerably well during the month. We have commenced at two points making surface trials, which we shall continue, in hopes of making some discovery on new lodes both to the east and west of the present workings.—Surface: Our dressing has been kept on without any serious interruption from the cold, and the samplings have amounted to 265 tons. At St. Amant our trial works are being pushed on with good speed. We have cut a small vein, showing a little ore in the 25. We hope both here and in the 45 to see something of the lode this month.

BENSBERG.—Capt. Craze, Feb. 9, in his first report since he assumed the management of the mine, writes that the mine is worked on the open-cut or quarrying principle, with two cross-cuts being driven north and south in Victoria shaft, at the 10 fm. level. The open-cut averages 40 fms. long, 20 fms. wide, and 7 fms. deep, lead ore, both carbonate and galena, being associated throughout with sand and limestone, and, although the richest deposits of carbonate seem to have been taken away portions still remain, and further discoveries may be made. There is no sign of exhaustion of the galena-bearing ground, which, moreover, seems to improve in depth. There has been some stoppage in the dressing department owing to breakage of a pulley that worked the centrifugal pump, and to parts of the drive fingers requiring some alteration. When these are completed they will materially increase the returns of dressed ore. Everything is carried on in German fashion and on German principles, and he will devote all his energies to bring it into a better state. He thinks they have the features of a great and lasting mine, which, when opened out properly, will yield good profits.

THE EMMA is shipping about 5 or 11 tons per day—that is about as near as anyone can come to the shipments unless he keeps the tally of the teams as they leave the ore-house. As this procedure would not pay, a marginal guess is the best your correspondent can do. If the reports of men who are working in lower levels of this mine are to be believed, I can see no reason why they should not be given the fullest credence—they have undoubtedly struck the largest, richest, and best defined body of ore ever revealed in the mountains of Utah. It is said they have gone through the limestone formation, and have found a ledge 13 ft. in width, enclosed in granite walls. The ore does not require sorting, and is sacked in the mine. Hannibal Williams, the superintendent, is always at his post, and is one of the hardest working men about the mine. He always receives his visitors very courteously, and will allow them to go anywhere around the mine, but not into it. The information that one receives from him the public may rely on.

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Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—S. Toy, Feb. 11: There is no material alteration in any part of the mine to remark on since my last report. The slope in the back of the intermediate level is 6 ft. wide, and worth 107 per cubic fathom for lead. In the No. 2 adit, driving east, the part of the lode which we are carrying is 5 feet wide, and worth 87 per fathom for lead.

ASSHEFON.—M. Whitford, Feb. 11: In the 40 end west, since my last report, we have cut into what we consider to be the principal part of the lode, and have bored a hole through quartz, blende, and lead, which lets out a large stream of water, and has drained the principal part of the water from the 30; but before cutting through the lode to ascertain its full value we shall have to fix a larger lift from the 40 to the 30, as the present is inadequate. After this has been done we shall with all speed cut through the lode, when we have every reason to believe it will lay open a very valuable piece of ground. Judging from what we have driven through at the 30, which end is over 60 fathoms in advance of the present 40 end, we may reasonably expect greater quantities of ore in this level, seeing that it is nearly 12 fathoms below the 30.—Browne's Shaft: Sinking is being urged on, and good progress is being made. In he winze sinking below the 30, west of Browne's shaft, the portion of the lode carried will yield from 8 to 10 cwt. of lead per fm. The slope in the back of the 30, west of Browne's, will yield from 18 to 20 cwt. of lead and blende per fathom. The slope east of No. 2 winze in the back of the 30, on the north part of the lode, has been worked up through to the 20, and is, consequently, finished. In No. 1 winze sinking below the 30, west of Maur shaft, no lode has been taken down yet; there are some branches on the north side which will yield from 6 to 8 cwt. of lead ore per fathom. The slope west of No. 1 winze, on the north part of the lode, will yield 16 cwt. of lead per fathom. The slope in the back of the 30, on the south-east branch, will yield 15 cwt. of lead per fathom. The slope below the 20, west of No. 1 winze, will yield 12 cwt. of lead per fathom. The slope in the back of the 30 west will yield 2 tons of lead per fathom.

BAMFFYLLDE.—S. Mitchell, Feb. 9: Everything throughout the mine is progressing highly satisfactorily: the yield of copper is good, and all the different points of operation on the copper lodes are looking remarkably well. Our stopes on the copper lodes will yield in the aggregate 10 tons of rich copper ore, and in the 102, driving west, the lode will produce 1 1/2 ton per fathom. All our several iron lodes are opening out splendidly, and are producing large quantities of rich iron ore. The lode in the new shaft at Stowford continues to produce 30 tons of best quality iron ore per fathom. The stopes at Croborno iron lode will turn out iron 8 to 10 tons of iron ore per fathom. The new lode discovered in the adit at Croborno is 4 ft. wide, and is composed chiefly of soft hematite ore, apparently of high percentages; samples will be analysed at once to ascertain its value. I find the analysis of the copper ore last shipped, also the parcel of ore that is now being forwarded to the railway station, are of highly satisfactory produce. Our operations on the tramway are rapidly arriving towards completion, the bridges being expeditiously got up. The mine is in fork, and machinery working admirably.

BEDFORD CONSOLS.—G. Rowe, J. Mitchell, Feb. 11: The part of lode carried in the sump-winze sinking below the 57, for 4 ft. wide, contains spar, capel, mundle, and spots of copper ore, with an increase of water as we go down, which makes it slow or progress. We hope, however, to get down for the next level by the end of this month.

BLAEN CAELAN.—W. H. Tregowan, Feb. 11: Engine Shaft: The ground in the cross-cut extending south from the 20 east is of about the same character as last reported, being composed of blue kilaas and carbonate of lime; water is coming more freely from the end every foot we proceed. The length of this cross-cut from the centre of the 20 is now 12 1/2 fms., of which 1 fm. 2 ft. was driven last month—re-set at 148s. per fm.—New Adit, South of Caelan River: This level is driving through very promising ground, containing good lodestuff, composed of spar, gossan, and carbonate of lime, spotted with lead and copper ores, and is improving fast as the level goes down, and has been driven through a good many fathoms of good ground, and the level now measures 15 fms. 4 ft. 6 in. This I have re-set to four men at 140s. per fathom.

BODU.—W. T. Harris, J. Barkell, Feb. 11: Excellent progress is being made in sinking the engine-shaft below the 163 fm. level, and if the ground continues as favourable as it is by the end of another month we shall be deep enough for a 175 fm. level, when we shall commence to drive both east and west on the course of the lode, and at once begin to open up fresh sections of ore ground for stopping and tribute. The ends both east and west in the 163 are in abeyance, for the want of men. We have commenced driving the 50 fm. level, east from Buntin's shaft; in advance of it, and has been driven through a good many fathoms of good ground, we expect to get into the same run of ore in this, the 50 fm. level. The pitches are yielding lead ore as usual, and the tributaries making good wages at their respective tributes.

BOWDEN HILL.—J. Goldsworthy, Feb. 11: The stratum in the adit level is showing favourable signs of leaving the slate rock and entering an easier channel of mineral-bearing rock. We look forward to make better progress now. We hope to lay the tramway next week, so as to get the quickest discharge for the stuff.

BIONFLOYD.—J. Davis, Feb. 11: Settings for February: No. 2 Shaft—Middle Lode: Four men to drive the cross-cut south of the 55, at 158s. per fathom; it was extended 6 ft. last month, and its length is now 7 1/2 fathoms.—No. 3 Shaft—North Lode: Four men a slope over the 73, west of Jones's winze, at 75s. per cubic fathom; lode yields 1 ton of ore per fathom. Four men a slope over the 73, west of the masonry arch, at 90s. per cubic fathom; lode yields 1 1/2 ton of ore per fm. Six men a slope over and close to the western end of the 84, at 90s. per cubic fathom; lode produces 1 1/2 ton of ore per fathom. Four men a slope over the same level, west of the winze, at 40s. per cubic fathom; lode produces 1 ton of ore per fathom. Six men a slope over the same level, east of the winze, to cut into the south wall, and carry a slope downward, at 40s. per fathom; lode yields 1 ton of ore per fathom. This level is now about 15 fathoms east of shaft.

BRYNAMBER.—G. Spargo, Feb. 11: There is no material alteration to report in the different points of operation since my last. A severe frost, with a stormy wind, has set in, and completely frozen the pumping wheel, which is now at a standstill. The shaftmen are at present repairing the plank in shaft, and putting in roll at bottom of downright for new wire rope to work over.

BURRA BURRA.—Feb. 13: Mine improving. Underground yesterday.

BURROW AND BUTSON.—J. Christophers, J. Mayne (St. Agnes), Feb. 11: The character of the lode at the 62 is about the same as last reported, but the end is now 3 1/2 ft. wide, and the hanging wall still not seen. We are through the cross-cut, and are now driving the 104 east, and find the sides firmer, but the level is still 10 ft. below the 20, and we are pushing this with all force. The lode in the 20, east of Tonkins's, continues as reported last week, producing about 1/2 ton of silver-lead ore per fathom, and from 3 to 4 cwt. of blende. The lode at the adit level east from the cross-cut is without change to notice. We have set a pitch 12 fathoms west of Tonkins's, to four men, at 35s. for blende and 8s. per ton for lead. The clearing and securing of the Butson adit will be completed in a few days, when the water will be down to the level.

BWADRAN CONSOLS.—R. Northey, Feb. 7: The lode in the 65 fm. level, east of Wynne's shaft, is 4 1/2 ft. wide, producing saving work for dressing. The level is now 15 fms. below the 55 fm. level, and is without any alteration worth about 15 cwt. lead ore per fathom. The lode in the 55 fm. level, west of Wynne's shaft, is 3 ft. wide, with strong branches of lead ore and spots of blende; I expect every day to get an improvement in this level. I have suspended the working of the slope in the back of the 55 fm. level, east of Wynne's shaft, it being too poor to pay for working. I shall put the men to sink a winze in the bottom of the 55 fm. level, to ventilate the 65, east of Wynne's, the air being very close here for the men to work. We have 30 tons of lead ore dressed; all the machinery is working well.

BWALCH CONSOLS.—R. Northey, Feb. 9: We hope to finish cutting the plat at the 52 fm. level by the end of the present week, and shall then commence to sink the shaft below the level with all possible dispatch with our present limited force of men, as I am very anxious to see this shaft to the 92.

CAEYGNON.—T. Hodge, Feb. 10: In the 70 end east we have a great, hard, strong lode, yielding lead throughout; it is letting out much water, which looks encouraging. The slope in the back of the 70 west level is worth

187. per fathom. In the rise over the last-named level the lode is 5 ft. wide, and worth about 307. per fathom. In the No. 3 winze sinking under the 71, west of King's shaft, the lode is 6 ft. wide, and worth about 257. per fathom. In the rise in the back of the last-named level, against Vivian's shaft, the lode is 6 ft. wide, and worth about 157. per fathom. In the winze sinking under the 61, east of King's shaft, the lode is 3 ft. wide, and worth about 157. per fathom. In the 20, east of new shaft, the lode is 2 ft. wide, and worth about 257. per fathom. In the deep adit level, west of Reservoir shaft, the lode is 3 ft. wide, and worth about 57. per fathom. There is nothing requiring notice at the other points of operation.

SOUTH CARN BREA.—W. Rich, J. Knottwell, Feb. 9: The lode in the engine-shaft sinking below the 150 carries good stones of copper ore. In the 150 east the lode is disordered by a cross-course, now worth 107. per fathom for tin, and looking likely to improve for copper as we leave the influence of the cross-course. We have holed the rise in the back of the 150, which has given good ventilation, and opened out ground for stopping both tin and copper.

SOUTH DAREN.—W. Rich, Feb. 9: We regret to inform you that the timber around the collar of the hauling-shaft for 4 fathoms in depth was in a very rotten state, so much so that a portion of it gave way. We were busily engaged in putting in new timber and repairing the same for eight days, during that time we could not draw any ore; this work now being completed the drawing and dressing are being pushed on regularly. Saturday last being our pay and setting day the following bargains were let:—The 90, to drive west, by six men, at 127. 15s. per fathom; the lode is 2½ ft. wide, producing saving work for lead, and showing a very improved appearance. The 80, to drive west, by six men, at 117. 15s. per fathom; the lode here is 3 ft. wide, worth 107. per fathom for lead and copper ore, with every appearance of a further improvement. To stop the back over the 80, west from the shaft, by eight men, at 80s. per fathom; the lode is 3 ft. wide, and worth 157. per fathom. To stop the back over the 80, west from the shaft, by six men, at 85s. per fathom; the lode is 3 ft. wide, and worth 187. per fathom. To stop the back over the 70, by eight men, at 90s. per fathom; the lode is 3 ft. wide, and worth 157. per fathom. To stop the back over the 50, by four men, at 80s. per fathom; the lode is 2½ ft. wide, and worth 117. per fathom. The machinery is in good working order.

SOUTH GREAT WORK.—S. J. Reed, Feb. 10: The lode still looks well in the 10 west. We have fixed a plunger-lift at the flat-roof shaft. We shall resume sinking shaft to-morrow, which is now 9 ft. below the 25 fm. level, as far as possible.

SOUTH MERLEYN.—R. Rowlands, Feb. 12: In the extreme north level we are not yet through the vugh. The 120 I shall be able to report fully in my next; the character of the lode is highly satisfactory.

SOUTH PHENIX.—J. Kelly, Feb. 12: Pearson's Shaft, Grace Dieu Lode: The shaftmen have finished cutting the plat in the 30 fm. level, put in the solar, &c., and are now sinking for bearers and cistern for standing lift; as soon as this work is completed we shall push on the sinking this shaft by nine men with all speed. In the 30, west of shaft, we have set the end to drive and stop by eight men, to carry all the lode, at 8s. 6d. per ton of stuff; the lode is 19 feet wide, principally peach, muddle, and quartz, impregnated with copper ore, and yielding good stamping work for tin; the lode, taking it altogether, has a very kindly appearance, and no doubt will be a very productive one for tin. —Hazeldean Shaft, Green Hill Lode: The 20 end driving west is suspended for the time. The stop in the bottom of the 10 fm. level east is producing very good work for tin. We have stopped the stop in the back of the 10 west, and intend sinking a winze, if possible, in the bottom of this level as soon as the stuff is cleared. The masons will soon finish the burning-house, and we hope to be able to commence burning next week. All the machinery is in good working order, and working well.

SOUTH ROMAN GRAVELS.—John W. Powning, Feb. 12: Shelfield: The lode in the 20 end, east of engine-shaft, is 18 ft. wide, of dark slate, carbonate of lime, and speckled with ore. Having driven through a good run of ore in the 10 east I fully expected to meet with it here ere long, but the shoot of ore may have dipped east faster than we calculated, in which case we shall have further to drive to reach it. The opening or cavity in the 20 west widens as we advance, and it is well charged with protoxide of iron and small lumps of ore. We are stripping down the lode north of the opening, which is about 4 ft. wide, composed of splendid carbonate of lime and large patches of lead ore, and improving as we go on. —Shelve: In the deep adit cross-cut, driving toward Roman lode, the ground is very much interspersed with strings of lime-spar, some of which contain nice stones of lead ore; these strings are unequally connected to the lode, and I feel sanguine by present indications that we cannot be far from it.

SOUTH ROSKEAR.—W. Skewis, J. Brenton, Feb. 9: Gregory's shaftmen have during the past week been clearing the 105 fm. level, east and west from shaft. We have broken some ground in sides of same, and find the lode to contain tin in a paying quantity—an average sample of 1 gr. 16 lbs. to 1 ton of stuff. We have drawn about 50 tons of stuff from the two pitches working at 9s. 6d. and 10s. 6d. in 11, in the 80, east of Gregory's shaft, and are much pleased with the appearance of the work. The tribute pitches in the eastern part of the mine are without change. The skip-road at the sump winze-shaft is completed to the 40 fm. level below adit. We have to-day sent about 9 tons of tin to the smelting house. There is about 14 tons of good quality copper ore on the floors.

SOUTH TOLCARN.—J. Vician and Son, J. Paul, Feb. 11: We have begun to take down the lode in the deep adit level west, and find it thus far in two branches about 3 ft. apart, with granite between, which partakes to some extent of the nature of the lode, and contains a little tin and copper. The two branches vary from 2 in. or 3 in. to 4 in. in width, and yield very rich tin and copper ores. They sometimes appear to be tending to a junction, and at others are diverging. Water is issuing very freely from both branches, but more particularly from the south one, and we are led to hope from this fact that they are connected with a larger lode, and may lead to the west. We are now preparing to hang the main-rod to the engine, and shall next week send down the drawing-lift to commence working below the adit.

ST. AGNES CONSOLS.—Wm. Vivian, Feb. 12: We are making good progress in sinking the engine-shaft below the 60, and at this level we have commenced to drive a cross-cut north to intersect Wheel Rock lode, with six men, at 97. fm. At the 48 we have holed the winze sunk from the 37 to the 48, and let the ground to stop at 10s. tribute.

ST. DENNIS CONSOLS.—T. Parkyn, Feb. 12: The men are making good progress in driving the cross-cut to intersect the north lode. I expect we shall reach the lode in a few days, which will send us to the 120 fm. level. —ST. JUST AMALGAMATED.—R. Pryor, T. Richards, W. Bawden, Feb. 11: Bawden's engine-shaft men will in the course of a few days drop the lift to the bottom of the shaft, immediately after which the sinking of the same will be resumed, and conducted with all possible vigour. The only change worthy of remark that has taken place throughout this mine since our setting report of last week is in the 120, driving west of engine-shaft, where the lode has very much improved in appearance and value. We have not cut through the whole of the lode at this point, but as we are engaged in doing so we shall be better able to state its value in our next report. Our machinery is working well.

SUCCESS, RUBY CLIFF, AND NANCY CONSOLS.—H. Francis, Feb. 12: I am pleased to say that we are making good progress in the sinking of Nancy shaft, in the eastern end of which we have just come upon a vein crossing the shaft containing a strong gossan, which so far looks promising; but I shall be able to say more of this in a day or two, or perhaps, in my next week's report. We have met with another cross vein in Rusby Cliff adit level, which looks well, and contains very pretty spar and some ore, and is accompanied with a very strong iron gossan, which has been the character of the last two cross veins this level has gone through. The main vein, on the south side of the level, is also stronger, and is spotted with ore and is still more promising than last week.

TAMAR CONSOLS.—George Rowley, Feb. 12: Since the weather set in our progress in working the manganese department has been very satisfactory. We have increased our staff of hands, and are clearing out the old workings to make the communication with the new workings from the trial shaft, which will be accomplished so soon as the driveage is sufficiently extended in that direction. The ground is rather stiff in the present driveage, in consequence of the hard manganese caps working in the lode which we are compelled to pass through.

TANKERVILLE.—A. Waters, Feb. 12: Watson's shaft, below the 140 fm. level, is down 5 fms.; lode now in the bottom 8 ft. wide, composed of carbonate of lime and lead ore, with a few pieces of copper. We are now in hard, compact ground, or lode, the cavity, and we think the richest portion of the great run (ore) having dipped west out of the shaft; we shall prove this matter when we drive west in the 150; shaft set to nine men, to be carried 12 ft. long by 8 ft. wide, at 257. per fathom deep. The stop in the back of the 140, west of shaft, by six men, at 67. 10s. per fathom; lode worth 707. per fathom. In shooting into the footwall of the said stop this morning we find that a very strong wide lode is standing behind our present workings, and as far as we can now judge, behind the shaft all the way from the 140 to the 90 fm. level, and it may be up to the 72 fm. level. We are cutting into this discovery with great interest, and hope it will turn out as good as it looks.

TANKERVILLE.—A. Waters, Feb. 12: Watson's shaft, below the 140 fm. level, is down 5 fms.; lode now in the bottom 8 ft. wide, composed of carbonate of lime and lead ore, with a few pieces of copper. We are now in hard, compact ground, or lode, the cavity, and we think the richest portion of the great run (ore) having dipped west out of the shaft; we shall prove this matter when we drive west in the 150; shaft set to nine men, to be carried 12 ft. long by 8 ft. wide, at 257. per fathom deep. The stop in the back of the 140, west of shaft, by six men, at 67. 10s. per fathom; lode worth 707. per fathom. In shooting into the footwall of the said stop this morning we find that a very strong wide lode is standing behind our present workings, and as far as we can now judge, behind the shaft all the way from the 140 to the 90 fm. level, and it may be up to the 72 fm. level. We are cutting into this discovery with great interest, and hope it will turn out as good as it looks. —No. 1 stop, in the back of the 140 east, by six men, at 67. 10s. per fathom; worth 807. per fathom. No. 2 stop, in ditto, by four men, at 67. 10s. per fathom; worth 407. per fathom. No. 3 stop, in ditto, by four men, at 67. 10s. per fathom; worth 407. per fathom. The stop in the back of the said level by six men, at 67. 10s. per fathom; lode worth 157. per fathom. The 120 cross-cut north to side lodes by four men, at 157. per fathom; we are crossing branches and strings of spar and lead ore almost every day in this cross-cut, and it would seem that the ground is charged with ore more or less for 40 ft. in width, that being the distance we now are end north to the old lode, which is every prospect of our finding rich ore. The stop in the 120, on main lode, by six men, at 67. 10s. per fathom, worth at present 3 tons, or 457. per fathom. There are signs in this stop of the existence of a large lode in the side of the present workings, similar to that referred to in the back of the 140; we are cutting into it as fast as six men can do, and hope by next week's report to give a good account of the trial. The 110, west of shaft, by four men, at 157. per fathom; lode worth 207. per fathom. The stop in the back of the said level by six men, at 67. 10s. per fathom; lode worth 407. per fathom. Stop in the back of the 100 west by six men, at 67. 10s. per fathom; lode worth 407. per fathom; we can see in this stop the same great lode as that spoken of in the 140 and 120, and men are now cutting into it; by six men, at 67. 10s. per fathom, worth at present 3 tons, or 457. per fathom. This is a very important feature in the mine, and will be lost in laying it fully open. Stop in the 72 east by six men, at 67. 10s. per fathom; worth 307. per fathom. Stop in the 42 east by six men, at 67. 10s. per fathom; worth 207. per fathom.

TEESDALE.—John Kneebone, Feb. 6: During the past month we have made good progress with the engine-shaft: a jack-roof is placed, and the men are engaged drawing stuff from a buntion, or platform, fixed at 6 fathoms from the surface; by the end of next month I hope to have a whimsey erected, and men working and raising ore to profit from old workings. Hopkins' level has been driven 5 fathoms since last monthly report, and is without much change: it is set at 57. 15s. per fm. Sand Syke level is now clear of the sand and surface water, which was so difficult to pass through; it is set at 67. per fathom to drive, lay rails, and arch complete. The road contractors have levelled and drained 1120 yards, put on 350 yards of bottom stone, made three conduits, and done some quarrying work, besides breaking a small quantity of limestone for a top cover. The weather keeps fine, and enables good progress to be made at all points.

TREGARDOCK.—J. and T. Spargo, Feb. 11: No lode taken down since our last driving towards the junction, but the influx of water increases, which we consider a good indication. The different stopes continue to yield good work for market. We hope to complete the new crushing wheel in the course of a week.

TRELEIGH WOOD UNITED.—J. Brown, R. Jeffery, Feb. 12: We have today sent down the last piece of main rod to connect and fix the pole at the 40 west. In the stop in back of the 40 west, on caunter lode, the lode is 4 ft. wide, worth for tin 97. per fathom. In the stop in back of the 30, west of cross-cut, on

the caunter lode, the lode is 3 ft. wide, worth for tin 77. per fathom; a very promising lode. In the 30 fm. level, driving west of cross-course, on the caunter lode, the lode is 1 ft. wide, principally muddle; it is a very kindly lode, producing good stones of tin, and will, we think, shortly improve. We have commenced a shaft on the south lode, near the Tolgus great cross-course, and the lode seen in the caunter pit is all that can be desired at so shallow a depth; from its appearance we think it will produce copper near to surface. We are pushing on operations with all speed.

TYLLID YD.—John Paul, Feb. 12: Everything is going on well; we have got through the burrow on the south side of the river, and the water will be brought on through the new lead opposite the new wheel by Saturday night. The shaftmen are going on well with the sinking of the shaft, and the ore in the winze mentioned in my last report is quite as good as it was then, and will yield 12 cwt. of lead per fathom, with every appearance of improvement as we proceed. Everything is being urged on with the utmost dispatch, and the appearance of the mine is very favourable.

VAN CONSOLS.—James Roach, W. T. White, Feb. 12: The winze sunk under the 35 from surface is now communicated with the roof of the adit, and new stopes let east and west of the same. The lode in the adit, east of Gundry's shaft, is without change since last report. No. 4 winze, sinking under adit, has improved, and is producing upwards of 1 ton of lead per fathom. There is no alteration in the lode in the 15 under adit, which is worth 5 tons of lead per fathom. We are now sinking a winze under this level 8 ft. long and 6 ft. wide, which is producing 4½ tons of lead per fathom; but we have still 9 ft. more of lode standing to the north which contains lead throughout. The recent important improvement in the 15 under adit has induced me to at once sink Gundry's shaft to another level, which is set 15 fms. certain bargain. No alteration in the stopes to call for particular notice. The general appearance and prospects of the mine have much improved of late. I have sent to the office a box of ore taken from the lode in the 15, which is well worthy of inspection.

WEST CARADON.—N. Richards, John Pryor, Feb. 11: Three stopes in back of the 55 will yield in the aggregate from 4 to 5 tons of copper ore per fathom. The lode east of rise is disordered by cross heads; present value about 1 ton per fathom. The lode in the 42, west of cross-course, will yield about 1 ton per fathom. The lode in the 30 is large, and producing some good ore, and from present indications likely to improve.

WHEEL COATES.—W. H. Martin, Feb. 11: The shaftmen are making fair progress in sinking below the 20.—No. 2 Winze: The lode in the 20 end west is much easier for driving, and the men are making good wages, worth for tin 107. fm. In the 20 end east the progress is rather slow, worth for tin 107. per fathom.—Ladder Winze: In the 20 end west the lode is worth for tin 117. per fathom. We expect to communicate No. 2 winze with ladder winze at the 20 latter part of next week. The masons are engaged building the calciner house.

WEST ESKAIR LLE.—R. Harvey, Feb. 5: Eastern Mine: We continue to make good progress in sinking Hamilton's shaft below the 24.—Western Mine: The underground bargains throughout the mine are about the same as last report. In consequence of the frost for the last few days dressing operations are not going on as fast as I could wish. As soon as a change in the weather takes place dressing will be pushed on with all dispatch.

WEST ESKAIR LLE.—R. Harvey, Feb. 12: In consequence of the continuance of the frosty weather our water-wheels are completely frozen up, and all surface operations at a standstill. The stopes in the back of the 10, in Western Mine, are in regular course of working, and will yield about their usual quantities of ore. I hope we shall soon have a change in the weather, when no time shall be lost in starting the wheels to work again.

WEST GODOLPHIN.—John Pope, jun., Feb. 9: Setting report for four weeks ending March 6, set on Friday last—Caunter Lode: Pressure shaft is sunk below the 50 fm. level 1 fm. 6 in.; the lode in the bottom of the shaft is 3 ft. wide, worth for the length of the shaft 207. per fathom—sinking by nine men. The 50 to drive north-west of the shaft, by two men, at 37. 10s. per fathom; lode 30 in. wide, worth 57. per fathom. One stop in the back of this level, to four men, at 37. 10s. per fathom; lode 3 ft. wide, worth 107. per fathom. The 50 to drive south-east of Pressure shaft, by six men, at 57. 10s. per fathom; lode 4 ft. wide, worth 157. per fathom. We are expecting to cut the Pink lode in this level every day. One stop in the back of this level, to four men, at 37. 10s. per fathom; lode 3½ ft. wide, worth 157. per fathom. The 40 to drive north-west of Pressure shaft, by two men and two boys, at 47. per fathom; the lode here is small just now, but we have passed through the South Hope lode, which is 2 ft. wide, producing low-priced tin-stuff. As we get away from the influence of this lode we may expect a good tin-product, similar to the levels above. The 40 to drive south-east of Pressure shaft, by two men, at 57. per fathom; lode 20 in. wide, worth 37. per fathom. The 20 to drive south-east of Pressure shaft, by two men, at 67. per fathom; the lode is 18 in. wide, saving work for tin. The new shaft to sink below the deep adit level, by six men, at 97. per fathom; lode small.—Pink Lode: No. 1 winze to sink to the 40 fm. level, east of the caunter, by six men, at 147. per fathom; the lode is 18 in. wide, worth 147. per fathom. No. 1 winze to sink in the 40, west of the caunter, by six men, at 157. per fathom; the lode is 2 ft. wide, worth 287. per fathom. Two tribute pitches, to six men, at 9s. in 17; four tribute pitches, to nine men, at 10s. in 18; one tribute pitch, to two men, at 11s. in 17; nine tribute pitches, to 18 men, at 13s. 4d. in 17; four tribute pitches, to nine men, at 15s. per fathom; one tribute pitch, to two men, at 16s. per fathom; at a standard of 60 per ton for the tin.

WEST GREAT CONSOLS.—Richard Pryor, Henry Vial, Feb. 10: The shaftmen are getting on well with the cutting down of Broadgate engine-shaft, and all things at surface are progressing satisfactorily. Saturday next being our pay and setting day a full report shall follow.

WEST GWENAP CONSOLS.—J. Nancarrow, Feb. 11: In driving westward the end still inclines south, but we have not yet got into a settled lode. The adit is in good repair.

WEST JEWELL.—J. Michell, Feb. 12: The adit level, west of Tregoning's shaft, which is about 7 fms. east of Sir Frederick's shaft, is much the same as last report. The new engine-shaft is suspended for the moment, but we hope to resume the sinking of it in a very short time. The more I see of this mine the more I believe it will make a good and lasting one. In the adit level, west of Freeman's shaft, the lode is about 3 ft. wide, producing saving work. The ground in the new shaft, which is being sunk to ventilate the level driving on Freeman's lode, is undergoing such a change as induces me to believe that we shall soon have the lode. The tribute pitches are looking just the same as for some time past.

WEST TANKERVILLE.—Arthur Waters, Feb. 12: Everything is going on here as fast as the men are able in a fair way. The 50 going south of Roman Graves boundary will be holed to the 50 north of south boundary shaft in course of the next 10 days. The 50 south of the said shaft will be pushed forward under the ore ground opened in the 46 forthwith by a full staff of men. The 46, towards the old men's workings and the south shaft, is making good progress. The stopes are just as when last reported on. We are delivering the ore last sold.

WEST WHEEL GORLAND.—J. Mayne, Feb. 12: All the ends and stopes continue to yield their usual quantities of tin. At Messer's lode in the shaft is 6 ft. wide, and looks very promising for an early improvement. In the 32, driving west, the elvan is still on the north, and when taking down the lode in the past week it produced good stones of tin; we look upon as a good indication for the future. No other change to report on.

WEST WHEEL TOLGUS.—Feb. 11: Taylor's shaft: The 125 west is being driven in kilias, and from the appearance of the lode, and the little we can see of it, we think we shall be able to drive in it very soon. Last Friday we put the men to take down the splice of the lode, which was very good in sight, but it soon slipped out to nothing. They then broke in through the main wall, but it being so wet and ragged could not see much of it. This week we have cut into it about 18 in., and we find it very good—all ore; so we have now commenced to go on in kilias, and as soon as the men are able in a fair way we shall put another party to cut it in.

We are glad this point is looking so well; it is splendid ore. The stop in the back of the 115, east of shaft, has become poor and is suspended. The other two stopes west of shaft are just as usual, only the best of them is nearly done. The lode in the 105 end west is very poor; this ground is not turning out as we expected it would. The lode in the 95 west is still poor; it is not regular, being split into branches, and mixed with white elvan branch with a little ore. The lode in the 85 west is looking well; it is 4 ft. wide, yielding 4 tons of ore per fathom—end dry. The back of the 85 we set last month on tribute, at 6s. in 17; it is now poor, and set at 18s. in 17. We have set a winze to sink below this level to six 13s. in 17; four tribute pitches, to nine men, at 15s. per fathom. Men will soon finish the cross-cut, the 40 for the boy, and are preparing the bob, &c. against the ground is ready. The lode in the 55 end east failed last week, but we are glad to say that it has again improved, and will yield 3 tons of ore per fathom. The 55 west is not in a very good lode, about 2 ft. wide, yielding 1 ton of ore per fathom. The stopes are looking very well. The lode in the 65, under the ore winze, which is suspended in consequence of the water, is poor.

WHEEL ARGUS.—T. Trahair, Feb. 4: The men stopping under the 30 fm. level east of winze, are down 6 fms.; the lode is just the same size, but the quality of the work is better: the lode is worth 57. per fathom, set at 50s. per fathom. The ground in the stopes is much better. The lode in the 105 end west is looking well, and is worth 107. per fathom; set to stop at 40s. per fathom. I believe the men on tribute are getting fair wages. The mine, on the whole, is looking better.

WHEEL ARGUS.—T. Trahair, Feb. 11: The men stopping under the 30 are down 7 fms. under the level. The lode in the stopes is 18 in. wide, and is worth 47. 10s. per fathom. The stop in back of the 30, west of skip-shaft, on the Elisha lode, is set on tribute. The lode in the stop in bottom of adit level, west of engine-shaft, on the Beacon lode, is looking well; the lode is 2 ft. wide, worth 87. fm. The lode has a very promising appearance. This, with two or three other points we have now set, will soon put the position of the mine for the better.

WHEEL CREBOR.—J. Goldworthy, Feb. 11: In the 120, east of Cock's shaft, the lode is taken down, and is 5 ft. wide, composed of capel, quartz, muddle, and copper, producing from 3 to 4 tons of copper ore per fathom. In the breast of the end a branch has gone through the lode, which for the present has lessened its value. We had a similar crossing once before, and it had nearly the same effect for a short distance. The driveage by the side of the lode is now being forced on, and the appearances are favourable for the lode again becoming of its former value. The stop in the back of the 120 is worth from 357. to 407. per fathom. In the 108, east of Cock's shaft, the men are taking down the lode, which is widening as we proceed; near the top it is from 4 to 5 ft. wide, and we have not as yet cut into the south wall; in the further part it will produce 5 tons of good copper ore per fathom, and gives good indications of a further improvement. In the 95 cross-cut south the ground is easier for driving. No other change. There is no change in the 72 east since last report. In the 43 east the lode is 3 ft. wide, of a promising description, producing muddle and copper ore to save. In the rise in the back of the 38 no lode is taken down; near the back the lode has made a splice, which we had no idea of meeting with; as just below the splice the lode showed fine indications we anticipated a good lode.

WHEEL GRENVILLE.—E. Hosking, W. Bennetts, Feb. 7: The men are making fair progress in cutting ground preparatory to sinking below the 150. The rise above the 150 is worth 307. per fathom. The lode in the 140 east is worth 257. per fathom. The rise above the 140 is worth 257. per fathom. The north shaft, sinking below the 120, is producing stamping work. The lode in the 120, east of north shaft, is 2 ft. wide and worth 127. per fathom. The stop above the 120 east is worth 157. per fathom. The lode in the 110 east is 20 in. wide, and worth 87. per fathom. The stop below the 110 east is worth 157. per fathom. The lode in the 100 east is 2 ft. wide, and worth 87. per fathom.

WHEEL KITY (St. Agnes).—S. Davey, J. Williams, Feb. 7: New Shaft—Pryor's Lode: The men are still dressing the lode in the 142 fm. level, east and west of shaft. The lode in the 130, driving west of shaft, is worth for tin 107. per fathom. In the 130 fm. level, east of shaft, no lode has been taken up. The lode in the 118, driving west of shaft, is worth for tin 117. per fathom. The lode in the 118, driving east of shaft, is producing good quality tin-stuff. The lode in the 106 fm. level, driving west of shaft, is worth for tin 157. per fm. The lode in the 106 fm. level, driving east of shaft, is 4 ft. wide, and worth for tin 77. fm.

In the north adit level, driving west of eastern boundary, we have no change to notice.

WHEEL MARY.—T. Parkyn, Feb. 12: The tin dressers are busy in clearing up the tin. We have no slime tin cleared up, but we have cleared up the crop; 1 estimate we have 4 tons to sell, and this has been raised from the north lode, except a few tons taken from the Pley and south lodes to test their value. All things are going on well, and I shall give a full report, with the future prospects, &c., next week for the meeting, the number of tons of tin sold, and the amount realised.

WHEEL MARY HUTCHINGS.—Henry Miners, Feb. 11: The water is so far drained from the Hemerford Mine as to allow of working, and the men are now engaged in clearing the 22 fm. level, to prepare for stopping. As far as we have seen of the back and bottom of the level we have every reason to expect a very productive lode. The lode in the 32 fm. level, east of shaft, is still improving, and is now from 20 in. to 2 ft. wide, producing saving work for the stamps; from the favourable character of the ground I think we shall soon see a greater improvement, especially as we near the tin ground gone down in the bottom of the 22 fm. level. There is also an improvement in the 22 fm. level, east of shaft; the lode is now about 6 ft. wide, producing saving work for the stamps, and looking promising for a further improvement as we go east. There is no change to notice in any other part of the mine since my last report. We have five stopes at work, worth on an average 57. per fathom. From the facts which are daily coming before my notice, I will again say that with a little patient perseverance the mine will again re-enter the Dividend List.

WHEEL RUBY.—J. Richards, Feb. 11: The lode in the adit end driving west has been disordered for the last three or four days with a mixture of kilias and elvan, in consequence of which it has been unproductive for tin, except a small vein towards the bottom of the level, which has continued all the time to yield some good tin. The lode, however, has again an improving appearance, and in a few feet further driving I believe we shall have a good lode for tin, and I think those changes in the nature of the lode and ground, on the whole, tend rather to improve than to impoverish them for tin mining. I am fully persuaded (as I have stated in a previous report) that we are now driving over a valuable course of tin, and in a few days I feel confident of having a great improvement in the adit level, which we are pushing forward as fast as we can.

WHEEL RUSSELL.—John Bray, Feb. 12: The lode in the 25 is worth 307. per fathom. The lode in stopes above this level is worth 257. per fathom. The lode in rise above the said level is worth 107. per fathom. The lode in stopes above the 40 is worth on an average 207. per fathom. No improvement in the 40 east. We shall sample for this month from 80 to 90 tons of ore.

WHEEL UNY.—Wm. Rich, M. Rogers, J. Coade, jun., Feb. 7: The rise in the back of the 150, east towards Gooding's shaft, is unproductive. The 140, west of this shaft, is worth 107. per fathom. The rise in the back of the 120, west of this shaft, is worth 107. per fathom. The 140, east of Gooding's shaft, is worth 67. per fathom. The 130, east of King's shaft, is worth 107. per fathom. The rise in the back of the 130 cross-cut south, towards Hind's shaft, is hard, which makes the progress slow; we are, however, keeping on this rise by six men as fast as possible. The 120 end, driving east of King's, is worth 57. per fathom. The 110 end east is worth 107. per fathom. A winze in the bottom of the 110 is worth 127. per fathom. The 100 end east yields a little tin. The 80 east is worth 87. per fathom. We have holed the rise in the back of the 60, which has given good ventilation in the 60 and 70 fm. levels. The 60 end east is worth 67. per fathom. The 50 east is worth 57. per fathom. The ground is rather harder in the 30 cross-cut north.

THE VAN MINE—SPECIAL REPORT.

Feb. 11.—The 75 fm. level cross-cut has been driven north of shaft 15 fms. 1 ft., and intersected the lode, but we have not as yet cut the main lode, where we expect to meet with the great run of water, and the most productive part of the lode, but are daily expecting to do so; so far as seen we have a strong masterly lode, containing lead ore throughout; this cross-cut is set to six men, at 240s. per fathom. We have also set to six men to cut the boom or ledge for water under the level, in order to be ready to resume the sinking of the shaft for the 90; set at 140s. per cubic fathom. The 60, east of shaft, is set to six men to drive in the soft by side of the lode; at 70s. per fathom; the lode at the furthest point opened upon is worth 507. per fathom for lead ore. The stripping down of the lode to full width at a point 10 fms. east of shaft in this level, is set to six men, at 110s. per fathom; the lode at this point is worth for lead ore 157. per cubic fathom. The 60, west of shaft, is set to six men to drive upon the main leader of the lode, at 240s. per fm.; the lode is worth 457. per fathom. The stripping down of the lode to full width, at a point 20 fms. west of shaft, in this level, is set to six men, at 70s. per fathom. The stripping down of the lode to full width at a point 10 fms. west of shaft, is set to six men, at 65s. per fathom. The stripping down of lode to full width westward from the 60 fm. level cross-cut, set to six men, at 70s. per fathom; the average width of the lode, so far as seen, is 4 fms., which in some places is worth 1007. per cubic fathom, but taking an average for the length and width opened, it is worth 357. per cubic fathom. At a point 11 fms. west of the shaft we have set to six men to sink a winze for the 60, at 160s. per fathom. The 45, west of shaft, is set to six men to drive in the side of the lode, at 80s. per fathom; so far as the lode has been tried at the present end (112 fms. west of shaft) it is worth 457. per fathom for lead ore. The winze sinking below the level of the 60, at a point 54 fms. west of shaft, is down 9 fms. 4 ft.; set to six men, at 140s. per fathom. The 55 fm. level, in the back of the 45, west of shaft, is set to eight men, at 65s. per fathom. The 90 fm. stop set to six men, at 60s. per fathom. The 85 fm. stop set to eight men, at 80s. per fathom. The 80 fm. stop set to eight men, at 80s. per fathom. The 70 fm. stop set to eight men, at 100s. per fathom. The 62 fm. stop set to eight men, at 90s. per fathom. The 54 fm. stop set to four men, at 90s. per fathom. The 44 fm. stop set to six men, at 90s. per fathom. The 37 fm. stop set to six men, at 90s. per fathom. The 30 fm. stop set to eight men, at 90s. per fathom. The 24 fm. stop set to six men, at 90s. per fathom. The 8 fm. stop, east of shaft, set to eight men, at 70s. per fathom. The 16 fm. stop set to eight men, at 70s. per fathom. The 24 fm. stop set to six men, at 90s. per fathom. The 16 fm. stop set to eight men, at 80s. per fathom. The lode in these stopes is on an average 21 ft. wide, and worth 267. per cubic fathom. The 30 fm. permanent level, west of shaft, is set to six men, at 100s. per fathom. The 8 fm. stop in the back of the 15, east of shaft, is set to four men, at 90s. per fathom. The 16 fm. stop set to six men, at 100s. per fathom. The 24 fm. stop set to eight men, at 100s. per fathom. The average width is 23 ft., worth 87. per fathom for lead. The deep adit Permanent level, west of shaft, is set to six men to drive, at 100s. per fathom.—Surface: The machinery is all in good working order, but the frost this week has completely frozen up our slime departments

* With this week's Journal a SUPPLEMENTAL SHEET is given, which contains—Original Correspondence: Gold Coast of Africa (G. Peacock); Richmond Consolidated Mining Company (S. A. Postlethwaite); Emma Mine (W. Ward, R. B. Hawkins, W. H. Tooke); Mine Development (J. T. Blanchard); Compressed Peat as a Cheap Fuel (E. Rowlands); Coal at Dangerous Cargos; No. VI. (A. Vassard); N. Ennor on Anonymous Writers; Mining on the Halkin Mountain; Mining in Cardiganshire, No. II.; Mine Payments—the Five Weeks' System; British and Foreign Mining Enterprise (R. Tredinnick); Carn Brea and Trefort Accounts (T. B. Laws); English Mining, Present and Future (T. J. Barnard); South Tolarne; Old Treburget Mine; Bunsberg Lead Mining and Smelting Company; Teoma Mining Company (W. E. Surtees); Almada and Tinto Silver Mining Company (J. M. Almada); Mining in Nevada during 1873 (J. D. Emersley); Meetings of the Hockley Hall Collieries, Moughold Head West Wilead Seton, St. Lawrence, Victoria, and Valentine Amalgamated, Eldorado Gold, and Ohio Companies.

BURROW AND BUTSON.—The report of this week, in another column, is very favourable. An advertisement is published to-day giving notice of change of offices and secretary. The appointment by the shareholders of Mr. Wm. Stevens as managing director, and by the board of directors of Mr. Von Uster, F.G.S., M.E. (the company's consulting mining engineer) as secretary, forms a consolidation of management as well as of expenses which must prove highly beneficial to the company.

GROGWINON.—This company sold, on Monday, a parcel of 40 tons of lead ore, at 14/3s. 6d. per ton, to the Burry Port Smelting Company—being 11s. 6d. per ton higher than the last. Another parcel will very shortly be ready for sampling.

EAST FOXDALE.—Messrs. Fuller, Horsey, Son, and Co. offered this mine for sale, at the Auction Mart, yesterday, when bids were made up to 4000/, at which price it was bought in. The property is situated about 1 mile from Douglas, Isle of Man, and comprises a grant on the Foxdale lode 1½ mile in length, and contains in addition three other known lead lodes. The lease has about 25 years to run, the rental is 41/ per annum, and the royalty 1-12th. The working plant and machinery have been already erected. The property would doubtless repay for energetic working with adequate capital.

THE RIO TINTO COMPANY have sold about 30 tons of cake copper and 30 tons of precipitate, netting about 6500/. The latter, of the new manufacture, is turning out remarkably well, giving from 70 to 80 per cent. produce, and there is still a very considerable quantity of the old to be worked up.

THORP'S GAWHER HALL COLLIERIES have declared their sixth quarterly dividend (being at the rate of 40 per cent. per annum), at the rate of 1/ per share, out of the profits for the three months ending Dec. 31 last. In addition to the six quarterly dividends a bonus of 25 per cent. was declared up to June 30, 1873. After payment of this dividend the directors have been enabled to carry forward a further additional amount to the reserve fund of last quarter.

BENTHAR COAL COMPANY.—The warrants for the second part of the dividend for the year ending Dec. 31 last, and at the rate of 10 per cent. per annum, has been forwarded to the shareholders, and are now payable at the National Bank of Scotland, Edinburgh, Glasgow, and branches.

ORGANIC CHEMISTRY FOR ARTIZANS.

The greatly increased facilities which a sound knowledge of organic chemistry affords for the successful carrying on of many branches of our national industries is now very generally recognised, yet the difficulties usually attending the earlier studies of the subject suffice to prevent a large number of even diligent students from acquiring anything approaching a satisfactory acquaintance with it; henceforth, however, these difficulties will be materially lessened, since from Prof. Armstrong's admirable little volume,* just issued as one of the Messrs. Longman's Text Books of Science, so complete an outline of the subject may readily be obtained as will be valuable of itself, and extremely useful for facilitating the profitable reading of the most complete works bearing upon the technology of any particular manufacture. The matter is treated in a thoroughly systematic and scientific manner, yet the style is sufficiently popular for any student of ordinary intelligence to derive advantage from it; he will learn the methods employed in ascertaining the composition of carbon compounds, and of representing them by empirical formulae, and by formulae which not only express their composition, but to some extent their nature also. He then proceeds to the consideration of the action of reagents on carbon compounds, and of the compounds of carbon with oxygen, sulphur, and nitrogen respectively; the remaining families of carbon compounds are then considered in the order of their relation to the hydrocarbons.

Chemistry being defined as the study of the nature and properties of the various elements, organic chemistry may, says Prof. Armstrong, be generally defined as the chemistry of carbon and its compounds, since carbon is the one essential element in all organic compounds. By the older definition only such bodies as were formed within the animal or plant were included in the category of organic compounds; it was generally held that the intervention of the so-called vital force was absolutely essential to their formation, and their artificial production was, therefore, regarded as impossible. This idea, however, was disproved by the synthesis of urea, a crystalline substance secreted in the urine of man and maniferous animals, effected by Wohler in 1828, and since that time many other organic bodies which occur naturally have been artificially produced. The most important organic substances met with in nature are those in which carbon is associated in various multiple proportions with the elements hydrogen and oxygen; next in importance are those containing nitrogen in addition to these; sulphur and phosphorus are also present in some few. The book is valuable, moreover, not only for the direct information which it furnishes, but for the care which the author takes to prevent the student from adopting erroneous views. Referring, for example, to rational formulae, he explains that monochloroacetic acid, the first product of the action of chlorine on acetic acid, is written CH₃Cl.CO(OH), and not CH₃.CO(OH), because we find that it exchanges (OH) for Cl when acted upon by PCl₅; thus, CH₃Cl.CO(OH).PCl₅=CH₃Cl.COCl+POCl₃+HCl. In short, the employment of such a group of symbols as (CO.OH) as part of a formula denotes that the compound represented will, when treated by certain reagents, be effected in certain ways—that it will form metallic salts, that it will exchange OH for Cl when acted upon by PCl₅; that it may be obtained probably from a body bearing to it the same relation that acetic acid, CH₃.CO(OH), bears to methane, CH₄, by replacing hydrogen in that body by iodine, this in turn by cyanogen (CN), and heating the product with water, &c. Rational formulae, he continues, such as the above, are frequently termed constitutional formulae, and by some structural formulae. The use of these terms seems to imply, however, that such formulae express the constitution or structure of the bodies to which they refer, but we much guard ourselves most carefully against this impression, since, hypothesis aside, we possess no real knowledge as to the internal constitution of chemical compounds, or of the mode of arrangement of atoms of which bodies are presumed to be made up; and although rational formulae may represent the proximate constitution of chemical compounds, yet in the present state of our knowledge it is advisable to regard them simply as condensed symbolic expressions of the chemical nature and mode of formation of the compounds represented; they enable us, so to speak, to decipher at a glance the chemical history of compounds. The consideration of formulae having been disposed of, the student is furnished with ample information on polymerism, metamorphism, and isomerism, so that the subsequent chapters of the book can be readily studied and understood. In the body of the work he is furnished with all the necessary information concerning the hydrocarbons, and their haloid derivatives, the alcohols, the ethers, the aldehydes, the ketones, the acids, and the amides, and the organic compounds which are the result of the exact nature and mode of formation of the various chemical substances used in connection with the various branches of industry are made familiar to him.

The volume is in every respect adapted to the wants of the practical man; it will afford him all the information likely to be useful to him in carrying on his business to the greatest advantage without troubling him with more theoretical details than are absolutely necessary to enable him thoroughly to comprehend the facts placed before him. In producing such a book Prof. Armstrong shows not only that he is himself a master of the subject, but that he possesses great facility for imparting that knowledge to others.

* Introduction to the Study of Organic Chemistry: the Chemistry of Carbon and its Compounds. By HENRY E. ARMSTRONG, Ph.D., F.R.S., Professor of Chemistry in the London Institution. London: Longmans, Green, and Co.

LEAD ORES.				
Date.	Mines.	Tons.	Price per ton.	Purchasers.
Jan. 31—Islay	20	0	£14 15 0	Weston, Son, and Co.
Feb. 7—Rookhope Valley	20	0	13 10 6	Shield and Dinning.
9—Grogwinon	40	14	3 6	Burry Port Smelting Co.
10—Green Hurth	40	15	1 6	Cookson and Co.
11—Great Laxey	100	22	2 6	Trefry's Trustees.
12—Old Treburget	32	37	10 6	ditto
— ditto	15	29	9 0	ditto
— ditto	6	21	10 6	Nevill, Druce, & Co.
— Talargoch	30	13	12 6	Walker, Parker, and Co.
— ditto	30	13	12 6	ditto
— North Hendre	35	14	18 6	A. Eytton.
— South Prince Patrick	20	14	11 6	ditto
— Prince Patrick	25	14	13 6	ditto
— West Prince Patrick	2	14	5 0	Walker, Parker, and Co.
— Van	225	14	5 0	ditto
— ditto	50	14	0 0	Pantner Lead Company
— ditto	50	14	12 6	Weston, Son, and Co.
— ditto	25	14	5 0	ditto
— ditto	100	15	8 6	A. Eytton.

Date.	Mines.	Tons.	Price per ton.	Amount.	Purchasers.
Feb. 6—Perran Consols	3 15 2 19	—	—	—	—
9—West Godolphin	8 16 3 15	£84 0 0	£ 566 0 0	6—	Boltho.
11—Penhall	15 2 0 25	61 17 6	955 1 2	2—	Dunbar.

ON SALE.—MASSIVE CRUSHING MILL, with two pairs of 24 in. rolls, in cast metal frame, and 12 in. diameter cast iron wire winding ROPE. Also, 250 yards of 1½ in. diameter IRON WIRE WINDING ROPE. Address, "X. Y. Z.," Mining Journal Office, 36, Fleet Street, London.

M. R. J. S. M. E. R. Y.
ASSAYER AND ANALYTICAL CHEMIST
SWANSEA.

The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, FEB. 6, 1874.

COPPER.	£ s. d.	£ s. d.	IRON.	per ton.	£ s. d.	£ s. d.
Best selected...p. ton	89	0 0 91	0 0	Bars Welsh, in London	12	10 15 0
Tough cake and tie	88	0 0 90	0 0	Do., to arrive	11	10 0 11 15 0
Sheathing & sheets...	95	0 0 96	0 0	Nail rods	12	5 0 12 5 0
Bolts	100	0 0 101	0 0	Staffs, in London	12	10 0 12 10 0
Bottoms	99	0 0 101	0 0	Bars, ditto	12	10 0 13 0 0
Old	85	0 0 86	0 0	Hoops, ditto	14	0 15 0 0
Burra Burra	88	0 0 89	0 0	Bars, at works	11	10 0 11 10 0
Wire	0 1 0 1/2	0 1 1/2	0 1 1/2	Hoops, ditto	13	0 14 0 0
Tubes	0 1 0 1/2	0 1 1/2	0 1 1/2	Sheets, single, & plates	10	0 15 0 0

BRASS.	per lb.	STEEL.	per ton.
Sheets...	10d.-11d.	Swed. in kegs (rolled)	—
Wire	10 1/2d.-11 1/2d.	Ditto (hammered)	20 10 0-21 0 0
Tubes	11 1/2d.-12 1/2d.	Ditto, in faggots	21 15 0-22 0 0
Yellow metal sheathing	8 1/2d.-9 1/2d.	English, spring	23 0 0-25 0 0
Sheets	8 1/2d.-9 1/2d.		
SPELTER.	per ton.	LEAD.	per ton.
Foreign on the spot...	25 0 0-25 10 0	English Pig, com.	23 0 0-24 0 0
" to arrive	25 0 0-25 10 0	Ditto, L.B.	23 10 0-24 0 0
ZINC.	per ton.	Ditto, W.B.	24 10 0-25 0 0
In sheets	31 0 0-32 0 0	Ditto, red lead	25 0 0-26 0 0
QUICKSILVER (p. bot.)	19 0 0-20 0 0	Ditto, white	30 0 0-32 0 0
		Ditto, patent shot	26 10 0-27 0 0
		Spanish	21 15 0-22 0 0

TIN.—The course of the market during the week has been continuously downward. Straits sold at 113s. down to 105s. cash, from which lowest point there has been some slight recovery; but the general tone is weak at the close, and 105s. to 107s. the rather nominal quotation. For arrival per steamer, 65 tons were sold at 102s. 6d., also three months' prompt at 105s., but prices for forward have been very irregular. Australian realised 106s. to 104s. English has followed the downward movement, ingot having declined from 115s. to 110s., closing strains thereat.

MESSRS. JAMES AND SHAKESPEARE.—The Swansea Ticketing averaged 14s. 9 1/2d. for 17 1/2 per cent. produce; by private contract 200 tons each, Chili ore and regulus realised 15s. 6d. and 16s. respectively. Metal has fallen during the week about 2/ per ton, and except at or near the lowest rates very little business was done. The purchases were almost entirely restricted to Chili bars, the whole of which were taken on cash terms from 81/ 10s. down to 79/ per ton for good ordinary brands, including Lota and Urmeneta. Australian sorts were neglected, and a few transactions only reported down to 88/ for Burra, 88/ for Wallaroo. The full Chili telegram is not yet to hand, but a message came on Tuesday last giving the figures for the first half in January at 1700 tons pure.

TIN.—English has receded 5s. to 6s., and is only in moderate request at the present date. Foreign sorts were comparatively steady until Monday last, on which day holders evinced a strong desire to realise, causing thereby a sudden drop in prices of fully 6s. per cwt.; since that date values have been very irregular, and it is, therefore, almost impossible to give exact quotations. The sales consisted almost entirely of Straits, at figures ranging from 112s. down to 105s. cash; 109s. to 102s. 6d. for arrival per steamer; and 107s. to 105s. for forward delivery; a moderate quantity of Australian selling from 109s. to 104s. cash.

REMARKS.—A very limited amount of business has been transacted during the past week, at prices somewhat more favourable to the buyers. On account of the paucity of business, sellers of copper, tin, lead, pig-iron, &c., have been compelled to make some slight concessions with a view of bringing buyers into the market, and to some extent these concessions have produced the desired result. At the same time, the demand is not sufficiently great to afford that stability to the market by which prices can be maintained. The spring quarter is, however, drawing near, when orders in anticipation of the opening of the northern ports are usually given out; and, if these orders come forward in the abundance which may be fairly counted upon, the day cannot be far distant when a healthy reaction may be looked for. Prices in the meantime are not likely to undergo any very material fluctuation.

COPPER.—The market opened very quiet, and on Monday there was no actual business reported in Chili bars which stood nominally at 81/. On Tuesday a telegram was announced from Chili stating that for the first fortnight in January to be 1700 tons. About 1800 tons of ore were disposed of at the Swansea Ticketing at an average of 14s. 10d. per unit, and Cape ore at 15s. 7 1/2d. Regulat realised 16s. Small parcels of Chili bars g.o.b. changed hands at 81/ for cash, also which a further transaction in g.o.b. took place at 80/ 10s. cash, and Wallaroo 91/ for one month, also for three weeks prompt. Lota, 80/ 10s. immediate cash; after On Wednesday the demand for Chili bars showed some improvement, and upwards of 200 tons g.o.b. were sold at 80/ cash, picked brands 3/ higher; Wallaroo realised from 89/ 10s. to 80/ cash, and 91/ to 91/ 10s. three months' prompt; Burra 88/ 10s. cash to 90/ 10s. three months' prompt. On Thursday a yet larger amount of business was transacted at prices still favourable to buyers. Chili bars g.o.b. were sold for cash at 80/ 7/ 10s., 79/ 2s. 6d., and 79/ cash; also 79/ 5s. one month, picked brands realised 82/ cash, Wallaroo 89/ 10s., Burra 88/ 10s., 88/ 5s., and 88/ 10s. To-day the market is quiet, Chili bars being quoted at about 79/. English varieties are quiet, though quoted 80/ to 90/, best selected 91/ 1/4 by 4 sheets 96/ 1/4, but may probably be had a shade under; strong sheets 97/ 1/4, yellow metal nominally 8 1/2d. The transactions in Chili bar in all amount to a little over 1500 tons for the week, and in Australian about 300 to 400 tons have changed hands. As compared with last week more business has transpired, but at lower prices. Yellow metal sales have been made at rather lower prices, and the general quotation is lower; 8 1/2d. is now the ordinary quotation for 4 by 4 sheets. Orders, however, are scarce, buyers not being inclined to ship on their own account, and will only execute indents as they come forward.

IRON.—In South Wales the attention of all parts has been engrossed in electioneering, and business has hardly yet reverted into the ordinary channel. In the Aberdare district there has been a sharp contest between the two great classes—the employer and employed, Mr. Fothergill representing the former, and Mr. Halliday, President of the Amalgamated Association of Miners, the latter. The return of Mr. Fothergill is another instance that the confidence of the country has not been wrested from that class which has hitherto mainly represented the people in Parliament. Trade generally is very quiet, but there are sufficient enquiries for railway material to encourage the hope that upon the opening of the spring season there may be a fair business in this description. There is very little doing in the iron trade in the North of England. Not only have the elections tended to contribute to the pre-existing dullness, but the lack of demand is in itself a matter which is becoming more seriously felt every day. That this is so is proved by the fact that during the last month stocks of pig iron in the hands of makers have increased to the extent of upwards of 12,000 tons. The whole of the stock on hand, though by no means very large, and capable of a very rapid reduction, should an active demand sprung up, is still much larger, being 32,377 tons more than the returns have usually been during the last year or two. The entire out-put of pig iron for the month of January was 175,325 tons. As compared with this time last year, there are seven months' business in blast; the present total number at work is 135/.

The demand for shipment to Scotland continues on the increase, and this accounts for the deliveries coastwise being in excess to the extent of more than 7000 tons. The increase in the stocks noted above is to be accounted for by the falling off in continental demand, which last month amounted to nearly 18,800 tons. The tendency of the market is towards lower prices. The decline has been gradual, and present rates are below the closing quotations of last year, which were about the lowest for the year. No. 3 in second hand is obtainable at 84s. net cash, and perhaps a shade under. Makers are indisposed to sell under 85s., and some are asking 2s. 10d. more. The one hopeful feature here, as in South Wales, is that enquiries for railway material continue to come in, and it is believed that as the season advances these enquiries will become frequent, and be for larger quantities. A considerable improvement must take place before these iron districts can be said to be in a condition of average prosperity.

During the week a special meeting of the Ironmasters' Association of the South Staffordshire district was convened at Wolverhampton, with the view of considering the wisest course to adopt with reference to the report which has been issued, embodying the resolutions adopted at a meeting of the Sheet-Iron Makers of Great Britain, at which it was proposed that considerable advances should be made in the current quotations for sheet iron. The Wolverhampton meeting was not prepared to adopt the suggestions of the sheet-iron makers, and it was resolved that a committee be appointed to prepare another report, and a list of quotations, for the consideration of a future meeting. The general impression seemed to be that although the report and list as rendered was not adopted, there must be an important rise in the value of sheet-iron before very long. The closing price for Scotch pig iron last week was about 100s. 9d. On Monday the market was quiet as regards the amount of business transacted, but quotations showed a slight improvement, and closed nearly at best, 101s. 6d. Tuesday's market was somewhat irregular, 100s. 1 1/2d. being the price at which the market opened, and important transactions took place down to 98s. 3d., from which point the market rapidly recovered to 98s. 9d. buyers. On Wednesday the market was again flat, opening 3d. under the closing prices of the previous day, and closing at 96/ 6d. Thursday's market showed a still further decline, business having been transacted from 96s. down to 94s. 6d., at which price the market closed. To-day the market has been a shade better, and prices have advanced to about 96s.

SHIPMENTS.	Tons	10,537
Week ending Feb. 8, 1873	7308	
Week ending Jan. 7, 1874	3234	
Total decrease since Dec. 25, 1873	22,516	

LEAD.—During the week the market has been very quiet, and prices have tended slightly downward. Good soft English pig is to be had from 23/ to 23 1/2 5s.

SPELTER.—Market is quiet, without exhibiting much variation in price, quotations for ordinary Silesian being 25s. to 24 10s.

QUICKSILVER continues as before—unimportant transactions having taken place at 19/ per bottle.

TIN.—The market which during last week showed some decline, and closed for Straits at about 113s., opened this week at still lower prices, business having been concluded on Monday at 106/ to 107/ cash, also 107/ prompt in April. A small parcel of Australian tin was sold at about 105/. On Tuesday the market showed rather more disposition towards activity, and sales were effected in Straits for cash at 107/ 10s., and 106/ 10s., prompt the end of March, and at the same price with three months' prompt. Australian, 106/ to 107/. On Wednesday a further business was concluded in Straits at 105/ to 106/ cash, and 106/ delivery in April and May; Australian sold at 104/. On Thursday business was done in Straits for cash at 105/ 10s., 106/ 10s., up to 107/ 10s.; English ingots realised 111/. To-day the market is quiet, quotations for Straits being as yesterday—105/ to 106/.

COPPER.—(Messrs. Grenfell and Rickards).—Our market is very quiet. Chili bars are at about 81/ 10s. There is a fair demand for export, but trade generally seems languid. We hope now the elections are over business will

improve. The Board of Trade Returns show a falling off in our exports for January compared with last year. We have reason to believe that in the present month, however, an increase will be manifested.

EXPORTS.	1872.	1873.	1874.
English copper, wrought and unwrought	1852	2229	1549
Foreign copper, unwrought	448	1172	1111
Yellow metal	964	845	782
Total	3264	4246	3442
IMPORTS.—Copper in ores	618	520	442
regulus	2802	1628	1411
Bars, cake, and ingots	4146	1792	3085
In pyrites, estimated	799	799	945
Total	8964	4719	5883

TIN.—The production of tin is evidently in excess of the consumption, although the latter is increasing. Australian fine tin is freely offering every day here at prices pounds below other foreign tin; the result of this is seen in the increased and large stock of foreign tin now held in London—say, 2356 tons. English smelters have been large sellers of late, the yield of Cornwall up to this time showing no diminution, whilst supplies from Australia continue to pour in. Speculation—except for a fall—in a standstill, and we fear as far as legitimate supply and demand points, that we have not yet touched the bottom.

MESSRS. VIVIAN, YOUNGER, AND BOND.—The West Coast telegram, received on the 10th inst., advised that for the first fortnight of January equal to 1700 tons fine, the price of bars having declined slightly, to \$18.45 per quintal. The market has been extremely dull, and latterly somewhat irregular, and prices have fallen about 2/ per ton during the week, Chili bars having sold at some 81/ down to 79/, and Wallaroo 91/ down to 89/. This decline at present has not produced much disposition on the part of consumers to buy except to cover sales, and the general appearance of the market is unsettled, and discouraging for any immediate prospect of a revival. English tough has sold down to 88/, and best selected at 90/, while strong sheets can be bought at 96/ for a good assortment, and yellow metal at 8 1/2d. to 8 3/4d. for sheets and sheathing.

TIN.—The course of the market during the week has been continuously downward. Straits sold at 113s. down to 105s. cash, from which lowest point there has been some slight recovery; but the general tone is weak at the close, and 105s. to 107s. the rather nominal quotation. For arrival per steamer, 65 tons were sold at 102s. 6d., also three months' prompt at 105s., but prices for forward have been very irregular. Australian realised 106s. to 104s. English has followed the downward movement, ingot having declined from 115s. to 110s., closing strains thereat.

MESSRS. JAMES AND SHAKESPEARE.—The Swansea Ticketing averaged 14s. 9 1/2d. for 17 1/2 per cent. produce; by private contract 200 tons each, Chili ore and regulus realised 15s. 6d. and 16s. respectively. Metal has fallen during the week about 2/ per ton, and except at or near the lowest rates very little business was done. The purchases were almost entirely restricted to Chili bars, the whole of which were taken on cash terms from 81/ 10s. down to 79/ per ton for good ordinary brands, including Lota and Urmeneta. Australian sorts were neglected, and a few transactions only reported down to 88/ for Burra, 88/ for Wallaroo. The full Chili telegram is not yet to hand, but a message came on Tuesday last giving the figures for the first half in January at 1700 tons pure.

TIN.—English has receded 5s. to 6s., and is only in moderate request at the present date. Foreign sorts were comparatively steady until Monday last, on which day holders evinced a strong desire to realise, causing thereby a sudden drop in prices of fully 6s. per cwt.; since that date values have been very irregular, and it is, therefore, almost impossible to give exact quotations. The sales consisted almost entirely of Straits, at figures ranging from 112s. down to 105s. cash; 109s. to 102s. 6d. for arrival per steamer; and 107s. to 105s. for forward delivery; a moderate quantity of Australian selling from 109s. to 104s. cash.

We cannot report upon any improvement this week in the MINING SHARE MARKET, which continues in a dull, depressed state. The settlement of the fortnightly account on Thursday and Friday was very light in comparison with former accounts.

The mines dealt in since our last have been Tankerville, West Tankerville, Old Treburget, East Lovell, Van Consols, Roman Gravel, South Roman Gravel, Penruthal, Pennerley, and a few others. Tin shares have been especially flat, and Dolcoath shares have declined to 44/ 46; Carn Brea to 50 1/2 55. Cook's Kitchen, 8 to 9, call of 10s. paid; Great Wheal Vor, 1 1/2 to 1 3/4. East Pool, 8 to 9; West Basset, 8 to 8 1/2. West Frances, 10 to 11; at the meeting no call was made; the loss on the quarter's working was 21/ 1/2, charging up four months' costs to Jan. 3, against three months' returns. Wheal Kitty (St. Agnes), 9 to 9 1/2; Wheal Basset, 20 to 22; Wheal Uny, 2 1/2 to 3; Penruthal Consols, 15s. to 17s. 6d. East Lovell, 10 to 10 1/2; the bunch of tin at skip-shaft has now been opened upon 5 fathoms long, and worth 2 tons of tin per fathom. At Tregonebria the lode at the 30, east of new engine-shaft, is worth 25/ per fm.; since the meeting on Dec. 31, 14 tons of tin have been raised. Van, 30 to 35, the sale of lead for the month is 450 tons at 14 1/2 11s. 7d. per ton = 6561/ 5s. West Seton, 20 to 22; at the meeting the accounts showed a profit on three months' working of 277/ 1/2, and a credit balance of 100/. Besides this, 951/ had been realised for copper not credited in the accounts. The returns for the ensuing quarter are estimated at less than the last.

At the Treleigh Wood meeting the accounts charging up the costs to Dec. 19, and crediting four months' tin, show a balance of liabilities over assets of 888/ 13s. 7d. The tin credited realised 2229/ 12s. 11d. The various points in operation at the mine are valued in the aggregate at 171/ per fathom; and an important improvement has taken place in the 44, west of Lynes' shaft, where the lode is worth 40/ per fathom, and this the agents consider a continuation of the good run of tin ground worked from the adit down to within a few feet of the 34 by the former workers.

Old Treburget, 1/2 to 1 1/2; the accounts circulated preparatory to the meeting on Tuesday next show a profit on sales from July 1 last to Jan. 3, of 1581/ 10s. 7d., out of which it is proposed to pay a dividend at the rate of 17 1/2 per cent. on the preference and 7 1/2 per cent. on the ordinary shares. It is generally not considered right or proper to pay dividends in limited companies until all the cost incurred in bringing a mine into a profitable state has been cleared off, and two modes of procedure are open to the shareholders, either to "write off," or, rather, to "capitalise" at once such outlay, and then to pay dividends from the time profits commenced; or to capitalise all future profits until the amount of such expenditure shall have been recouped, for the benefit of those who may be shareholders some years hence. Under these circumstances the directors of Old Treburget have adopted the wise and proper course of "capitalising" at once all costs incurred in bringing it to its present profitable state, and to divide present and accruing profits amongst the shareholders. The accounts now circulated show available assets to the amount of 4327/ 17s., out of which there are bills payable, and sundry creditors, 1383/ 15s. 4d., leaving a balance of 2944/ 1s. 1d., and from this amount the dividend will be deducted. The costs are charged to Dec. 3, and against January costs the ores sold this week (53 tons) realised 1771/ 1/2, and a profit of 600/ on the month. The reserves are valued at 15,000/. The agents report that the 70 south has been a continuous course of ore for 45 fms. long, varying in value from 9/ to its present 14/ per fathom. A winze sinking below this level is worth 10/ per fathom, and the 80 has come into ore worth 8/ per fathom. The agents further state that the mine has considerably improved, and looking at the different levels they see no reason to doubt why they should not do much better in the ensuing twelve months than they have in the past. Bedford United, 17s. 6d. to 22s. 6d.; Great Laxey, 12 1/2 to 13 1/2; Marke Valley, 15s. to 20s.

Basset and Grylls; at the meeting here the costs for five months were 2777/ credits, including tin sold, 3128/; old materials, 456/ = 3614/ 1/2, showing a debit balance of 659/ 1/2, and a call of 7s. 6d. per share was made. The agents reported they were now able very nearly to meet current costs, notwithstanding the high price of materials and the low price of tin. Spenser Consols showed a loss on six months' working of 400/ 1/2, and a call of 2/ per share was made. A promising lode has been cut in the eastern part of the mine, and upon this much of the future will depend. Pennerley, 1 1/2 to 2. Tankerville have been in request up to 9, and

there is a report that a good lode has been cut, worth 40% to 50% per fathom, and it may materially improve the prospects of this fine old historical mine, which during the last 30 years has had many ups and downs in the market. At one time, at least 30 years ago, we remember it was so poor that shares were unsaleable at 10% each, and then a discovery soon sent the shares up to 1000% each! And from that time to 1872 the mine has paid in dividends to the shareholders the sum of 78,550%. Such discoveries, always possible, always hoped for, are the great encouragements to miners in dull and depressed times like the present. No one can tell how soon a stroke of the pick in any mine may reveal riches that will neutralise the effects of the present low and exceptional price of metals, and were it not so the prospects of mining would be dull indeed. There are mines now on the market at mere nominal values with better prospects for good discoveries than many which two years ago were rushed after at fabulous premiums; and all that would seem to be required on the part of investors is a judicious and proper selection. But the general public seldom buy when things are low and worth buying. A very few years ago tin was down to 40% per ton, and it was generally considered that tin mining in Cornwall was at an end. At that time mines became more depressed than they are now with tin at 70% (we speak of the price paid to the miner). Tincoft shares, we think, were sold at 3% each, Carn Brea shares under 10%, and many others at equally low rates. But in a very short time tin rose to 90% and 100% to the miner; Tincoft shares advanced to 70%, and Carn Brea shares to 150%, both paying large dividends. And although we may not be sanguine enough to expect such a tremendous rise again, we may fairly hope to see the present depression pass away ere long. For experience has taught us all that so surely as manias are succeeded by panics, so are panics succeeded by sudden reactions.

Among Foreign Mines, which, by the way, have been among the chief cause of the present depression, Eberhardt and Aurora are quoted 3½ to 4½; Emma, 3 to 3½; Flagstaff, 2½ to 2; Last Chance, 17s. 6d. to 22s. 6d.; Birdseye, 3 to 3½; Chontales, 17s. to 19s.; Tecoma, 15s. to 17s. 6d.; Sweetland Creek, 4½ to 4¾. Thornhill Reef, 1½ to 2; advices by wire as to the crushing are daily expected. The machinery, we are informed, is capable of treating 300 tons of stone per week, and previous crushings gave a profit of 2% per ton. Richmond, 5½ to 6; Sierra Buttes, 2 to 2½; Cape Copper, 28 to 30; Fortuna, 5½ to 6.

Among Collieries, Cardiff and Swansea shares are ½ to ¾ prem. Newport Abercrombie (3% paid), 2½ to 3; this company is expected to strike a good seam of coal in a few weeks. West Mostyn, 12 per cent. preference (2% paid), 2½ to 2¾.

The market for Mine Shares on the Stock Exchange during the week has been moderately active. The lower price of tin has adversely affected shares in mines producing that metal; but lead mines, on the contrary, have remained steady. American descriptions have not been in much request, although in Emma shares a considerable amount of business has been transacted. Hydraulic mines have been in demand at quoted prices.

The metal market has been dull, and quotations are lower. Copper comparatively inactive at irregular quotations, and the reduced prices have not yet induced consumers to come forward as buyers. Tin has ruled lower, and although some recovery took place from the worst point the tone is weak. Tin plates are in steady demand. Lead steady at quotations. Spelter inanimate, but without quotable alteration.

Richmond Consolidated, 5½ to 6. Cable received: "Week's run, \$18,000, from one furnace; charcoal short." The bad state of the roads has, it appears, prevented the delivery of the required supply of charcoal. All the mines in the vicinity are, it appears, similarly inconvenienced. When the usual February frosts set in, access from mine to Palisade station will probably be open, and a large stock of accumulated bullion forwarded. The immense importance to the future working of the Eureka mines becomes more apparent as the great increase in their rate of production multiplies the evils of the old roads.

Emma shares declined to 2½, 3½ upon the issue of the official circular (referred to below), and closed 3 to 3½; private cables advices, received yesterday, announce a further sale of "M" (ordinary) ore, 225 tons, realising \$51,000, and says, "the mine will astonish everybody." Flagstaff, 2½ to 3; Last Chance, 1 to 1½; Tecoma, ½ to ¾. Utah, 1 to 1½; the directors have issued a notice for a general meeting to make a call. Now that the dressing machinery has turned out a complete success, no doubt the call will be promptly responded to. It is possible, however, that the frost will delay regular dressing for a couple of months.

Eberhardt and Aurora, 3½ to 4½; at North Aurora the eastern tunnel on the Central drift has been completed, and the end of the drift presents good prospects of coming upon a body of ore; Riddale drift is in good ore; the new mill is running well, and the amount of ore hauled is increasing, but the roads are bad. The reports and accounts are to be forwarded to the shareholders as soon as possible. New Pacific, 5½ to 6; Mr. Pringle writes that he is pushing on with the work, and expects to resume operations in the 400 feet level before the end of January.

Colorado Terrible, 3½ to 4; the agent reports, Jan. 19, "The appearance of the lower workings of the mine has much improved the last few days. In the sixth level, west drift, we have a good vein of ore of a brittle silver, and will when assayed return high figures." Sierra Buttes, 2 to 2½; the receipts from Sierra Buttes for January were \$37,274, and the cost of mining and milling \$15,638; the Plumas Eureka receipts for the same period were \$18,748, and cost of mining and milling \$14,650. The prospects are reported better for next month. It may be of interest to mention that the dividends paid by the mines of San Francisco during the year 1873 aggregated \$13,490,181, the assessments, or calls, having amounted to \$6,671,043, leaving a balance in favour of stockholders of \$6,819,138, or a little over 100 per cent. of the assessments. During 1872 the dividends amounted to \$6,722,000, and the assessments to \$4,097,000.

Hydraulic Gold Mine shares are in request. Every letter from California speaks of the heavy snows, which they say ensure a long winter season, and miners are anticipating good returns. Of English companies, Birdseye Creek has struck the first note, with a capital clean up, which we announced last week, and the other companies are expecting equally good results. Cedar Creek, 2 to 2½; Mr. Ludlum is steadily progressing with washing on seven claims, and writes that he is pleased with the prospects for the season. Blue Teat, 5 to 5½; washing here is progressing well, and particulars of a clean-up may be shortly looked for. Birdseye Creek, 2½ to 3½; the news from here has been anticipated by the telegram published last Saturday. We are requested to announce that the whole of the 5000% asked for by the board has been subscribed on debenture. This will enable the directors to purchase a piece of intervening ground at Red Dog, thus shortening the required tunnel there by about 1500 feet, providing funds for its completion, and freeing the entire earnings for distribution amongst the shareholders. Sweetland Creek, 4½ to 5; McLean writes that he is washing with three grants, one of them being on the side dirt. He thinks it will be advantageous not to clean-up until the close of this month. Holcombe Valley, ¾ to 1; the new mill was expected to start work Jan. 15, and as a quantity of ore was ready stacked, a good result was anticipated, although of course the first lot crushed will be of inferior value. The developments in the mine have laid open a large quantity of rich quartz.

St. John del Rey, 185 to 195. The advices appear in another column; they announce the best return obtained since the lode was reached, and appears to be a better recovery of the gold contents than that advised by previous mail. Don Pedro, ¾ to ¾ dis.; the produce for December was \$469 oits.; the loss upon the month was 945½; the produce for the corresponding month of the previous year was 6595 oits. Rossa Grande, ¾ to ¾ dis.; the produce for December amounts to 3610 oits., and the cost to 1225½, leaving a profit of 308½; from Bahu the richest rocks of ore ever extracted from this shaft are being quarried in the present bottom. The advices appear in another column.

English and Australian, 1½ to 1¾; the report to be presented on Thursday states that the profit and loss account for the year ending

June, 1873, shows an available balance (after deducting the 21st and 22nd dividends) of 62777; out of this sum the directors recommend a dividend at the rate of 1s. 6d. per share, and the usual addition to the reserve fund, which is now increased to 9010%. It is further stated that the loss sustained in the first six months of the year ended June 30, 1873, by the heavy and continuous fall in the price of copper of nearly 19% per ton, has been recovered in the second six months by the saving effected by smelting the low-class ores at Newcastle, and also by the comparative steadiness of the copper market.

Van, 34 to 35; in another column will be found the usual monthly report from the manager. The lode in the 75 fm. level, as far as seen, is fully equal to expectations, and is laying open a splendid course of ore. Other parts of the mine are looking well. The four-weekly sale, on Thursday, realised 56117 5s. Van Consols have been unusually depressed. On enquiry at the office we find there is no falling off in the mine, and the report of this week from the manager is the most encouraging received for some time past. The lode in the 15, under adit, is producing 5 tons of lead; and a winze under the level is producing 4½ tons of lead for 8 ft. in length with 9 ft. of this lode standing, containing lead for the whole width. Some large buying orders at the present low quotations, 3 to 3½, could not be effected this afternoon; shares very scarce. Roman Gravels, 16½ to 16¾; Tankerville, 8½ to 9½.

Derwent shares have changed hands at 3 to 3½; the enterprise has been most favourably received, more especially by those familiar with the history and reputation of these famed mines, which have yielded ore to the value of 1,000,000%. The judicious application of new capital is confidently expected to ensure great and permanently successful results. Bog, ¾ to ¾; the sinking of the engine-shaft is rapidly progressing, and in another month the agents expect to be deep enough to commence another level. The lode in the shaft holds good, and a large body of ore will be laid open when the next level is reached. Pennerley, 1½ to 2; from the report in another column it will be seen that the mine is looking much better throughout. Perkins Beach, ¾ to ¾; the agent reports an improvement here, and speaks encouragingly of the immediate future. Subjoined are the closing quotations:—

Bog, ¾ to ¾; Carn Brea, 50 to 55; Devon Great Consols, 1¼ to 1½ prem.; East Van, 1¼ to 1½; East Lovell, 10 to 10½; East Caradon, 1 to 1¼; Great Laxey, 12 to 12½; Great Wheel Vor, 1¼ to 2; Perkins Beach, 6s. to 8s.; Pennerley, 1¼ to 2; Roman Gravels, 16½ to 16¾; Hington Down, 1¼ to 1½; Marke Valley, 15s. to 20s.; Tincoft, 4 to 6; Tankerville, 8½ to 9½; Van, 34 to 35; Van Consols, 3 to 3½; West Chiverton, 5½ to 6½; Wield Greenville, 5 to 5½; West Tankerville, 2 to 2½; Almada and Tinto, ¾ to ¾; Birdseye Creek, 2½ to 3½; Cedar Creek, 2 to 2½; Colorado Terrible, 3½ to 3¾; Cape Copper, 28½ to 29½; Chontales, 17s. to 19s.; Don Pedro, ¾ to ¾ dis.; Eberhardt and Aurora, 3½ to 4½; Emma, 3 to 3½; Flagstaff, 2½ to 3; Frontino, 3s. to 5s.; Last Chance, 1 to 1½; Malpas, 1½ to 3½; Malabar, ½ to ¾; New Quebrada, 4½ to 4¾; Richmond, 5½ to 6; Rica, 10s. to 15s.; St. John del Rey, 190 to 195; Sweetland Creek, 4½ to 5; San Pedro, 1½ to 2; Sierra Buttes, 2 to 2½; Tecoma, ½ to ¾; Utah, 1 to 1½.

EMMA.—The official circular which appears in another column has been received with disfavour and surprise. The Chairman returned from New York on Jan. 25, and Feb. 9 was "the earliest opportunity" for the board and committee of conference "to lay before the shareholders the present position and prospects of the company." Comment is freely made upon the apparently irreconcilable statements which the circular contains; while the mine is represented to be in a "very discouraging position," and telegrams state "that the bottom of the mine is looking very bad," the Illinois Tunnel Company have agreed to "a considerable extension of time for the payment of its claim, and to accept promissory notes payable at intervals between April, 1874, and January, 1875;" and Mr. Park is also content "to wait for the settlement of his own claim until the above payments have been made and the mine is in a better position." Furthermore, it is generally remarked that, although some considerable time has been allowed to elapse since the directors communicated with the shareholders, even now the managers' reports, as also "the latest telegrams," are withheld; and, according to the statement of a shareholder, whose letter we publish elsewhere, the secretary "refused to allow him to see the latest telegram," and the Chairman "refused him an inspecting order for his agent to go underground on his behalf," although (the writer says) he has "more shares in his name than the board and committee of conference put together." It cannot be regarded as disrespectful to urge that, judging by past experience, the shareholders are at least as able as the directors to form an opinion upon the actual position of the mine—under any circumstances, they certainly should be allowed the opportunity. It is remembered that in the earlier history of the company, when monthly dividends were being paid, the outside rumour that a serious "cave in" had taken place was officially denied, but subsequently proved to be strictly true; and it is now thought by no means improbable that notwithstanding the official circular, the mine is opening out in a much more encouraging manner than indicated. Regret is expressed that, although Mr. Attwood travelled from Utah to meet the Chairman in New York, not one word is said about the result of the interview. The latest private advices, dated Salt Lake City, Jan. 21, state that the "Emma is opening up the best mine in Utah; there is a large body of the selected ore assaying over 700 ozs. of silver per ton; the predominant quantity, however, yields 320 ozs. of silver per ton, and of this there is a large quantity developed." "If," says the writer, "the English will not believe these facts it is no fault of the mine, for, say what you will, it is the queen mine of Utah; it rests now more with the directors for this company to be what it should than anything that can be done here. Attwood has done his part, and done it nobly. Let the directors do their part, and they will do only what every stockholder demands." Some hand specimens from the deepest workings of the new "development" (as shown by the certificate of an assay forwarded to us), yielded from 5400 to 5500 ozs. of silver per ton; and the writer, under date Jan. 22, says—"that every foot of 'development' now being made in the mine adds value to the ore in sight."

Several important meetings of COLLIERY and IRON COMPANIES will be shortly due, and we believe in the majority of instances the directors will present balance-sheets such as will be highly satisfactory to the proprietors. Prices for iron are quoted lower at Glasgow and Middlesbrough, while common pig-iron is reported to be 3s. 6d. lower at Wolverhampton.

The change in the weather has arrested the headlong fall in coals, and caused a rise of 2s. in Thames-street, and we are not aware of any reduction elsewhere. A great demand still continues for hematite ore from West Cumberland and Cornwall. Considerable quantities of ore are being exported from Antrim, in the North of Ireland. Bowling Iron, 75 to 80; Marbella Iron, 4½ to 4¾; Monkland, 7½ to 8; United Bituminous, 1 to 1¼. The ordinary meeting of the Rhymney Company is called for the 25th inst. A good enquiry has existed for Littledean Colliery; shares, however, are seldom on the market; they close 5 to 6. Cardiff and Swansea, 4 to 4½; it is rumoured that since the last meeting the current earnings have increased to a most surprising and gratifying extent; shares are well worth buying at the present moment. The shares of Sharlston Collieries have declined; the meeting will be held on the 17th inst. Lay Hall, 9½ to 10½; Bath Colliery, 4 to 4½. Brynllor quoted nominally at par; there is no market for the shares. Newport Abercrombie, 2½ to 3; Clew Hill, 15s. 3d. to 17s. 6d. The directors of the Mwyndy Iron Ore have issued their report and balance-sheet in anticipation of the meeting to be held on the 18th inst.; there has since been a good enquiry for shares at advanced prices, and they close rather firm at 1½ to 1¾; the manager states that the quantity of ore raised amounted to 32,816 tons, showing an increase of 3156 tons over the previous year. The receipts from the sale of ore have increased by more than 10,000%, while the extra costs compared with the previous year only amount to 3275% odd. Altogether they have made a profit of over 18,000%, being the largest amount ever realised in any one year. An interim dividend of 1s. 6d. per share was paid on July 18 last, and at the forthcoming meeting the directors will recommend a further dividend of 4s. per share. The Carlist disturbances in the North of Spain, through preventing ore being shipped from Bilbao, appear to have been very advantageous to this company. At the Hockley Hall meeting the report was adopted, and a dividend at the rate of 16 per cent. declared, payable on and after the 16th inst. Six dividends in succession have now been paid of 16 per cent. Power was given to the directors to borrow 60,000%.

on debentures, in order to extend the workings and build 300 cottages. Four thousand vendors' shares are offered for subscription in the West Mostyn Colliery Company at par. Ten per cent. is guaranteed for six years, commencing from April 1 next. The present shareholders will have a priority in the allotment.

At Swansea Ticketing, on Tuesday, 1779 tons of copper ore were sold, realising 22,968/ 17s. 6d. The particulars of the sale were—Average standard for 9 per cent. produce, 96/ 2s.; average produce, 17½; average price per ton, 12/ 18s. 3d.; quantity of fine copper, 309 tons 6½ cwt. The following are the particulars of the two last sales:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Jan. 27, 1873	297	12 0	18	£13 13 3	15s 2d	275 16 6
Feb. 10, 1873	98	2 0	17½	12 18 3	14 9	73 15 0

Compared with the last sale, the decline has been in the standard 1/ 10s., and in the price per ton of ore about 5s. 3d. There will be no sale on March 3.

The subscription lists for the issue of 400,000% share capital of the Tasmanian Main Line Railway Company will be closed on Tuesday next for London, and on Wednesday for the country. The price is 1¼ to 1½ prem.

The preference shares of the Wayne's Merthyr Steam Coal and Iron Works are ½ to 1 prem. The debenture bonds of the Honduras Railway Conversion Company are ½ to 1 prem.

The Teign Valley Railway, which passes close to the Frank Mills Mine, has complied with the standing orders of the House of Commons, and there is every chance of its being early completed.

ORES, &c.

I BUY at the highest prices:—
LEAD ORES.—LEAD-SILVER ORES.—SILVER-LEAD ORES.
SILVER-LEAD.—HARD LEAD.—ANTIMONIAL LEAD.
GOLD AND SILVER ORES.
ZINC AND LEAD ORES MIXED TOGETHER.

Particulars by letter.

ARMAND FALLIZE, Ingénieur, à Liège (Belgium)

CAPPER PASS AND SON, BRISTOL,

ANTIMONIAL LEAD, HARD LEAD, LEAD MATTE, LEAD SLAGS, SULPHATE OF LEAD, LEAD ASHES, COPPER SLAGS, COPPER REGULUS, TIN ASHES, ZINC ASHES, SELLER DROSS, HARD SELLER AND MIXED METALS, DROSS or REFUSE containing COPPER, LEAD TIN, or ANTIMONY.

Mr. JOHN HENRY POOLE,
MINERAL AGENT,
LIMPIAS, PROV. SANTANDER, SPAIN.

FOR AMERICAN COMPANIES.

MR. F. CAZIN, MINING AND CIVIL ENGINEER,
Constructor of the Mineral Dressing Works at Rosa Clara, Hardin Co., Ills., and at Frumet, Mo.,

PATENTEE OF CAZIN'S CONTINUOUS ORE-PLUNGER JIG (OR SEPARATOR).

MANUFACTURER OF ORE-SEPARATING MACHINERY.

Makes Plans and Contracts for Ore Concentration and Smelting Works, guarantee to work certain quantities at less primitive and running expenses, with better proportionate yield, than any offered on the North American Continent.

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Direct letters to—

GOLCONDA, POPE CO., ILL., UNITED STATES, AMERICA.

EIGHT PER CENT. DEBENTURES OF £10 EACH.

THE GWENDRAETH VALLEY COLLIERY COMPANY (LIMITED), CARMARTHENSHIRE, announce that the DEBENTURES applied for ARE NOW READY for delivery, with the Ten Half-yearly Coupons attached, and are to be obtained at the offices of the company in exchange for the bankers' receipts.

THERE REMAIN for disposal about one hundred of these Debentures, which are secured as a FIRST CHARGE upon the whole of the valuable undertaking, including both the property and the profits, and are repayable within five years from date of issue, with option to convert them into shares of the company of equal amount within two years.

These Debentures form a certain and profitable mode of investment.

Application forms, with prospectuses, are to be obtained from the Secretary of the company, at the offices, 3, Lombard-court, Gracechurch street, E.C.

DEBENTURES AT TEN PER CENT.

THE MAUGHOLD-HEAD MINING COMPANY (LIMITED).

The Directors of this company are DESIROUS of RAISING the sum of £8000 on DEBENTURES for any even sum, and bearing interest at 10 per cent. per annum, payable half yearly, and for fixed periods of three, five, seven, or ten years. These Debentures will form a first charge both for principal and interest on the company's property. These mines have been regularly raising and shipping ore of the finest quality at the rate of 300 tons per month since the commencement of operations in April, 1873, and, by the erection of the necessary machinery, which will be effected immediately on the completion of the subscription for these debentures, the production can be increased to 1500 tons per month.

Forms of application or debentures (no payment for which will be required, unless the whole of the £8000 be subscribed for) may be had on application to the Secretary, at the registered offices of the company, 30, John-street, Bedford-row, London, W.C.

BURROW AND BUTSON MINING COMPANY (LIMITED).

Notice is hereby given, that the OFFICES OF THIS COMPANY have been REMOVED to 10, JOHN STREET, ADELPHI, W.C., and that Mr. HENRY VON USTER, F.G.S. (the company's consulting mining engineer), has been APPOINTED the SECRETARY of this company.

By order of the Board of Directors,

London, 9th February, 1874. J. W. WILLIAMSON, Chairman.

MR. T. L. COTTINGHAM OFFERS TO CAPITALISTS:—

ONE SILVER-LEAD SET, proved very rich.
ONE LEAD ditto.
ONE IRON ditto.

And a PROPRIETOR'S INTEREST in a RICH GOLD SETT.
FOR SALE—A CAPITAL PERCUSSION TABLE, in first rate condition.
Mold, Dec. 22, 1873.

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MINING ENGINEERS AND GEOLOGISTS,
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MINING, offers his ADVICE to CAPITALISTS, INTENDING PURCHASERS, or SELLERS.

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SLATE QUARRY " " "

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Mines inspected, and confidential reports and surveys made.

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In connection with PERSONAL SECURITY for a TERM OF YEARS.

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AUSTRALIAN COLONIES—TASMANIA.

UNDER CONTRACT WITH THE GOVERNMENT OF TASMANIA.

TASMANIAN MAIN LINE RAILWAY COMPANY (LIMITED).

Subscription for £400,000 Share Capital.

In 4000 Provisional Certificates of 10 shares of £10 ea. li.

(Equal to £100 share capital each certificate.)

Notice is hereby given, that the SUBSCRIPTION LIST for the above will be CLOSED on TUESDAY next, the 17th inst., for LONDON, and on WEDNESDAY next, the 18th inst., for COUNTRY APPLICATIONS.

By order:—

London, February 12, 1874.

TREDINNICK'S MISCELLANY,

AND MINING AND COMMERCIAL MAGAZINE.

8vo, published monthly; 1s. single copy, 12s. annually, 1 vol. 35 free.

Payment in advance.

January number in the press.

TREDINNICK and Co., Dealers in Stocks and Shares, 32, Fleet-street, London, E.C.

Notices to Correspondents.

* * Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be filed on receipt; it then forms an accumulating useful work of reference.

GOLD MINING.—In Muspratt's book on "Chemistry," Vol. II., p. 279, there is a diagram of Smith's Portable Gold Amalgamator. Could some reader give me any information as to where these machines may be obtained? If so, I shall feel much obliged.—W. P.: *Dolpely.*

WARMING RAILWAY CARRIAGES.—The last few days must have convinced most travellers of the desirability of warming railway carriages, yet I think few would, without more ample details, be disposed to ask for the adoption of any system of warming involving the use of charcoal, the fumes from which are known to be not only unwholesome but absolutely deadly. The asphyxiation of travellers on "the leading German railways" may be permissible, as the close unventilated rooms characteristic of the country may have prepared them for the process, but in this country, where we are accustomed to open fires and fresh air, I doubt whether the Kiesling and Berghausen asphyxiator would be fully appreciated. All that is wanted for facilitating the beautiful warming of railway carriages is a good and quickly joined pipe union, so that tubing running through every carriage and every compartment could readily be joined when the carriages are coupled. The exhaust steam from the locomotive, which is now wasted in the air, could be passed through this tubing, which would act as a surface condenser, and at the same time warm the longest train completely.—*ATHEM, Newcastle.*

SOUTH PRINCE PATRICK.—Will the officials cause to be inserted in the Journal, as oforetime, the weekly reports of South Prince Patrick Mine?—*LEAD ORE.*

SINGLETON AND PORT STEPHENS RAILWAY.—A dispute having arisen between the Chairman and Mr. Prance at the Australian Agricultural Company's meeting, on Tuesday, as to whether there is a range of mountains between the places named, I should be glad if some of your correspondents acquainted with the district would state what are the natural obstacles to the construction of a line between the two places, and whether it is or is not true that, with the exception of the rails and railway iron, everything for the making of the line can be had on the spot? What is the distance in miles, and what is the height of the highest hill to be crossed?—*W. C. City, Feb. 13.*

PEAT FUEL.—"T. W. P."—The best machine for converting peat into good fuel is that manufactured by Messrs. Clayton, Son, and Howland, of Harrow Road, Paddington, where we presume a machine could be seen.

GREAT WEST CHIVERTON.—The liquidation of this company is complete, and the mines and materials have been sold to pay the merchants' claims. This company came to grief chiefly from want of sufficient financial support by the shareholders. The mine, now West Great Chiverton, has been purchased by parties who have appointed Mr. Von Ester (the consulting mining engineer of the adjoining Burrow and Butson Mines) general manager, who would, no doubt, answer any enquiries addressed to him at The Green, Hampstead. I am assured that the shareholders in the late Great West Chiverton will be allowed a preferential allotment of shares when a new public company is formed. The present operations promise good results.—*AN ORIGINAL SHAREHOLDER.*

ANALYSING METALS.—"T. W. F."—The best work on assaying is "Mitchell's Manual," edited by Mr. Crookes, and published by the Messrs. Longman. The price is about 11s. 6d.

RICHMOND.—We are requested to state that if "A Shareholder" will send his name to us for publication, that his being connected with the company can be verified, the statements contained in his letter published in last week's Journal shall be fully answered. The directors cannot reply to anonymous writers.

Received.—"F. H."—"H. B."—"Scrutator" (Teesdale)—"W. C."—"J. S. P." (San Francisco)—"J. R." (Nevada)—"J. T. B." (Utah)—"C. W."—"Shareholder" (Last Chance)—"H. B."—"A. R."—"P."—"C. J."

* * The TITLE-PAGE AND INDEX to VOLUME XLIII., for the year 1873, was published in the Supplement to the Journal of Jan. 24.

THE MINING JOURNAL, Railway and Commercial Gazette.

LONDON, FEBRUARY 14, 1874.

OUR RAILWAY IRON EXPORTS.

The new year has opened rather gloomily as regards our exports of railway iron, and yet matters may be said to have moved on rather better than could at one time have been anticipated. The Russian demand has, of course, nearly ceased for a time, now that we are in the depth of winter; and the efforts which the Czar and his Ministers are making to stimulate the production of iron in Russia may possibly not be altogether without effect, even when the Baltic is again open for the reception of foreign railway material. We are looking, however, when the spring has well advanced, for some revival in our export of rails and accessories to Russia, although it is doubtful whether 1874 will prove such a satisfactory year in this particular as 1873. It is noticeable that a rather considerable movement of our railway iron took place in January to Belgium, our shipments in that direction having been 3259 tons last month, while in January, 1873, they did not exceed 1177 tons, and in January, 1872, 674 tons. Italy, again, took 3609 tons of our railway iron in January, while in January, 1873, the Italian consumption only amounted to 2954 tons, and in January, 1872, to 177 tons. We also sent 4321 tons of railway iron to Egypt in January, while our exports to the land of the PHAROAHS in January, 1873, were 1200 tons, and in January, 1872, 1901 tons. When we come to examine our exports to the United States we find an extraordinary, or, at any rate, a very remarkable, falling off. The decline has also been a continuous one. Thus our shipments of railway iron to the United States in January were not carried beyond 7444 tons, while in January, 1873, the Great Republic took 27,838 tons, and in January, 1872, 35,299 tons.

The accelerated declension indicated in the American demand by last month's figures is attributable, of course, to the chilling effect produced by high prices, and also to the partial collapse of American railway credit—a collapse which has greatly impeded for a time the development of extensions in the extreme Western States and Territories, as well as in the South. The latest advices from the United States seem to point to a partial restoration of confidence; at the same time, we incline to the opinion that the prosecution of new American railroads will for many months to come be carried on with much greater prudence than hitherto. Some revival was noticed in January in the demand for our railway iron in such prominent South American States as Brazil, Peru, and Chili; still, we are not doing so large an iron business with that quarter of the world as that which we developed in 1872. The British American demand, like the Russian, is dormant for the present; but a satisfactory increase is noted in our railway iron exports to British India and the great Australian group of settlements. If we group together our railway iron exports to British America, British India, and Australia in January, and compare them with our exports in the same direction in January, 1873, and January, 1872, we shall see that we have begun the new year extremely well as regards those vast dependencies. The annexed table illustrates this:—

EXPORTS OF RAILWAY IRON.			
	Jan., 1874.	Jan., 1873.	Jan., 1872.
To British America	—	3	425
„ British India	3596	1817	190
„ Australia	6108	1438	937
Total	9701	2958	1852

We believe that this colonial demand is destined to grow very materially in importance. Canada has been suffering recently from the effects of the American panic, but the Dominion is now reviving, and the Canadian demand for our rails will revive also. The Grand Trunk of Canada—to say nothing of the Great Western of Canada, the Northern of Canada, and the Midland of Canada—must prove a valuable customer for steel rails in 1874; and the demand for railway facilities in Canada is so strong and unmistakable that we can hardly suppose that the work of extension will not be continued with more or less energy. With regard to India, the long-discussed State lines may be said to be at last making some progress, hence the revival noticed in the Indian demand for our rails. The Wurdha Valley (State) Railway has been opened to Hinghungat. This Wurdha line, which is on the same gauge as the Great Indian Peninsula Railway, joins that system at Wurdha; and for the present it will be worked by the Great Indian Peninsula, on the same terms as those on which the State traffic to Khamagom and Amraoti is now being conducted. The Wurdha line is being continued to Chanda, and its completion to that district will be of great importance, as it will bring a supply of cheap fuel within reach, not only of several railways, but also of presses, and spinning and weaving mills now in

course of erection, or in actual operation in the Berars and the central provinces. Upon another State line from Agra to Ajmere the laying of the rails is stated to have been advancing of late at the rate of three-quarters of a mile per diem. Space fails in which to treat in detail of railway progress and railway prospects in Australia, but there can be no doubt that the locomotive is destined to achieve new triumphs in our vast Antipodean settlements.

THE ECONOMICAL USE OF COAL ON RAILWAYS.

Economy in the use of coal is in its relation to the great railway systems of this country a matter of the highest importance, and the price now reached by fuel has rendered the serious consideration of the question a matter almost of necessity. Two years ago, when it was less urgent than at present, the directors of the Lancashire and Yorkshire Railway, with a view of giving practical assistance to the thorough investigation of the possibility of effecting the desired end, placed at the disposal of the Institution of Mechanical Engineers one of their engines, for the purpose of testing an apparatus invented by Mr. G. WARSOP, and as the result of those experiments, which have shown a saving in fuel of from 12½ to 15 per cent., the appliance is now being adopted on their line. Two engines have already been fitted up, a third, named the "Andus," is just completed, and is at present exhibiting at the Miles Platting Works of the company, and three others are undergoing the necessary alterations. A small model of the apparatus is also being shown at the Peel Park Exhibition, and a brief description of the invention may be interesting. The Aero-steam engine, that being the name given to the invention, is constructed in such a manner as to promote the more rapid and easy generation of steam by the introduction of heated air directly into the mass of water within the boiler.

The method by which this is effected is as follows:—An air-pump fixed on either side of and worked by the engine forces a current of ordinary atmospheric air through a coil of heating pipes placed in the smoke-box; the air thus flowing through the coil is, by the waste heat of the boiler, raised to a temperature of about 600° Fahr. A long perforated tube, extending the whole length of the bottom of the boiler admits this heated air into the water, the effect being, that not only is some portion of the water converted into steam by direct contact with the heated air, but the whole mass is instantly stirred up and aerated. A small percentage of the heated air also joins the steam on its passage to the cylinder, and, by retarding condensation, adds to the energy of the steam, and consequently increases the working power of the engine. Thus, in addition to a saving of fuel to the extent already indicated, a considerable gain in work is effected, representing, according to tests, two additional wagons in a full train of 24. In addition to these advantages the action of the heated air prevents a permanent settlement of incrustation on the boiler, fire-box, or tubes, obviates priming, and diminishes the liability to explosion. The requisite pressure of air can be obtained almost instantly, and the working of the engine being connected with the working of the valves, or air-pumps, secures its constant and continual injection into the boiler. The apparatus is applicable, not only to locomotives, but to stationary engines, and in these a very high percentage of gain in work done has been effected. Although the Lancashire and Yorkshire are at present the only company really adopting the apparatus, we understand that others have the matter in contemplation, any definite action having been suspended until the results of the experimental tests of the appliance should afford the means of judging of its actual utility.

THE MINERAL INDUSTRIES OF NEW SOUTH WALES—THE AUSTRALIAN AGRICULTURAL COMPANY.

That the development of the mineral resources of a country affords a certain means of promoting its general prosperity is now universally acknowledged, and in the case of our Australian colonies there can be no question that it is to the opening up of their vast mineral wealth in coal, gold, and tin that New South Wales, Victoria, and Queensland owe their present prominent positions; and that it is to further and more strenuous efforts in the same direction that colonists may look for their still more rapid commercial and industrial progress in the future. The result of the meeting of the Australian Agricultural Company, on Tuesday, is one upon which Australians generally, and the shareholders in particular, may well be congratulated; it has completely removed any impression that may possibly have existed that the Governor and board were incompetent to conduct the business of the company, and has convinced the executive that no fault will be found with them by the proprietors for making the necessary outlay for testing an important, though hitherto neglected, portion of the company's property, supposed to contain great mineral wealth, and known to possess great natural advantages in the shape of splendid harbour accommodation, and a moderately fertile surface, readily capable of improvement. It is, perhaps, to be regretted that the meeting commenced by the exhibition of slight hostility between the executive and the shareholders, yet there is much compensation for that regret in the fact that it has been the means of forcing more energetic action than would otherwise have been taken, and has produced no injury to anyone. It has been demonstrated that both the Governor and Mr. Prance, the leader of the opposition, were equally desirous of promoting the best interests of the company, and the harmless combat has led to a common line of action being taken, which will speedily prove beneficial to all.

The Port Stephens estate, the neglect of which formed the subject of dispute, is unquestionably valuable; and accepting the broad fact that the Australian Agricultural Company owns that estate, and is indisposed to apply its own capital to its development, the proposition of Mr. R. H. Prance, that the company should transfer the Port Stephens property to a distinct undertaking, willing to provide the necessary capital for working it, appears at once reasonable and business-like. Mr. Prance's argument was very plausible, that by the formation of a separate company to develop the Port Stephens estate every Australian Agricultural shareholder who might think proper to facilitate the work by contributing funds could participate in the profits to be derived, whilst those who did not so contribute would remain in the same position as at present. The Governor, however, explained that there was a slight fallacy in this line of reasoning, inasmuch as, assuming every Australian Agricultural shareholder to take part in the new concern, their position would in no wise differ from that in which they would be placed by deciding that the Australian Agricultural Company should itself develop the Port Stephens estate, whilst assuming that only some of the shareholders joined the new concern, those who did not do so might be prejudiced through the Port Stephens property being nominally transferred (the Australian Agricultural Company not having been sufficiently tested to be enabled to form an accurate opinion as to its value) for less than it subsequently turned out to be worth.

At the present time the Australian Agricultural Company is in the enjoyment of great prosperity, for which it is entirely indebted to the integrity and untiring exertions of the present Governor and board, and in those cases in which subsequent knowledge has proved that better things might have been done it has usually been shown that the course decided upon was at the time that which would have been generally approved. As an instance of this, reference may be made to the new pit at the colliery. The Governor, in his opening address, remarked that as to the new pit, it would have occurred to some of the shareholders that it would have been better if the pit had been constructed of greater diameter, and the board were of the same opinion, but in 1870 they did not anticipate all the consequences of the remarkable trade which had taken place in the last 18 months, and all he would say in justification of the board was—Who did? The pit was sunk for a special purpose, and was well adapted for it; they did, however, send out a larger engine than was at first contemplated, as it cost only a few hundreds more, and they would now have the advantage of it, as it could be used for both pumping and winding. Referring to the Port Stephens estate, he explained that although the estate offered but little encouragement to the agriculturist it contained much that deserved attention and might demand enquiry. The tract had been but little explored. The coal seam might be found, and then the value of the

property would be much increased. They had asked Mr. Merywether whether he could superintend the boring operations in addition to his present occupation, and they trusted that the result would be satisfactory, although the present position of the company was such that it could bear disappointment as to the Port Stephens estate.

An unfortunate observation from the Governor that the present opposition was the result of self-interest elicited from Mr. Prance the willing admission that he most certainly was guided by self-interest, which represented 1-20th part of the concern, and he proposed an amendment to the resolution for adopting the report, the effect of which was to reserve the question of dealing with the Port Stephens property, with the view of a special meeting being called, so that he and his friends might provide the money for developing the estate. In seconding the amendment Mr. Woodroffe remarked that Mr. Prance's letter had awakened thoughts of a character anything but pleasant, and the directors' reply did not appear satisfactory. It was the first time he had attended a meeting in London, although he had long been a shareholder, and he was surprised to hear a property of this magnitude put aside in such an off hand manner. He had formed the opinion that Mr. Winship was quite incompetent to pronounce an opinion, as all his experience had been in connection with coal. If the board had told the shareholders that the reports of competent men had decided them to hold their hands for some time it would have been satisfactory, but as it was the shareholders suggested that the Port Stephens property should be carried over to a different proprietary. A little less irritability on both sides would not have been disadvantageous, and would have prevented many personalities, which wasted much valuable time, and of no general interest beyond proving that so much glass was used in the construction of Mr. Ravenshaw's house whilst he was Governor of the company; that he should have been the last to throw stones, and that the present Governor (Mr. Edward Hamilton) possesses valuable local knowledge, which will prevent him imitating Brigham Young's engineering experiment of making a canal wherethrough the water could only reach its destination if it flowed upwards, by attempting to construct a railway over a chain of mountains so as to connect Singleton with Port Stephens. But the little eccentricities of the opposition will now be set right before any mischief is done, and the discussion at the meeting will merely have removed some erroneous impressions.

Regret was expressed by Mr. Price at some remarks which had fallen from the Governor, but it must be acknowledged that the Governor, whether rightly or wrongly need not be considered, felt himself much aggrieved, and adopted the thoroughly English principle of fighting first and then enquiring why the challenge was sent. Mr. Price, though an old personal friend of the Governor, did not hesitate to acknowledge that it was Mr. Prance's movement which had stirred up the directors, and he certainly objected to their Gladstonian absurdity of three courses. First they referred to a forced sale, which he regarded as a blind, no one, whether director or shareholder, ever having contemplated a forced sale; then there was the suggestion that they should do nothing which was bad in principle, inasmuch as they were landowners, and should, therefore, direct attention to the property, so as to derive advantage from it at the earliest possible period; and then there was the third alternative—that the survey should be resumed, which, as the company had been in existence since 1824, came rather late. He maintained that no shareholder would submit to the Port Stephens estate lying longer idle, and in saying this he certainly seemed to express the views of the entire meeting.

The partial surveys hitherto made do not appear to have been so satisfactory as could be desired. Mr. Odenheimer was a mere geologist, with little practical experience, and an awkward cargo in a rough and unsettled country, since he could not ride, and could only be transported from place to place in a side-saddle. This was at least surveying under difficulties. Then there was Mr. Winship, whose experience was limited to collieries. And now it is proposed to employ another gentleman, who has, doubtless, the advantage of connection with the Royal School of Mines, and of having received a technical education, but whose report would have comparatively little influence in attracting capital from men of business, especially after the lamentable mistakes of professors, fellows of the Royal Society, and others with similar theoretical positions, in estimating the value of mineral properties brought before the public during the past few years. To select Mr. Hilary Bauermann to report upon a property in New South Wales in preference to Mr. Merywether, or some other really qualified man connected with the colony, is likely to add to the number of mistakes of which the shareholders of the Australian Agricultural Company complain; and here again it will be the shareholders, and not the Governor and board, that will be responsible for the failure. The proprietors might well have contented themselves with a survey made under the superintendence of the company's officers, and in a report framed upon data so obtained the shareholders, and certainly the public, would have had greater confidence than in that of a gentleman whose experience has been in a totally different field.

Until the survey be made, and the report upon it be in the hands of the shareholders, it is difficult to form any reliable estimate as to the probable value of the Port Stephens estate, but as the question has now been raised, it may be hoped that ere long the necessary facts will be forthcoming. Until then each must enjoy his own opinion as to whether it is so valuable as to justify an individual shareholder in offering, as Mr. Prance offered at the meeting, to pay the whole expenses of the survey, because the development of it would reimburse him as a shareholder; or whether it is of such merely prospective worth that the directors were justified in leaving it to be developed by "future generations," and when the population of the region shall be numbered "by millions instead of by thousands."

MR. GEORGE ELLIOT AND THE MINERS.—Much regret has been expressed at the defeat of Mr. G. Elliot, the late member for North Durham. Mr. Elliot is one of the largest employers of labour in the kingdom, being interested in mines in Durham, Northumberland, North and South Staffordshire, and North and South Wales, and has always been a most liberal and considerate master. Yet for some fancied grievance with regard to the part Mr. Elliot took in the passing of the Mines Regulation Act, the pitmen of North Durham not only opposed his election, but showed their appreciation of past favours by assaulting him and some of his friends. But the gratitude of colliers is a thing not to be thought of. As regards the part Mr. Elliot took with reference to the passing of the Mines Regulation Act, we can say it was in the highest degree to his credit, for he exhibited a desire to sacrifice his own interests for the benefit of the miner and his family. In the evidence he gave before the Select Committee on coal, he said he took a very active part in the passing of the Mines Bill, because it had a great deal in it which tended to the security and protection of the workmen; whilst, with regard to the interference with children between the ages of 12 and 18 years he accepted it, believing it would be a boon to the working men, and "especially to the younger members of the mining population." In the interest of the miners in expressing the great difficulty he experienced in obtaining freehold land for the purpose of building cottages, he said he thought it would be fair for him to ask the House of Commons to take forcible possession of land for the purpose. Such traits as these show the thoroughly unselfish and disinterested character of the man, and we very much regret that he should have received the treatment he has at the hands of those for whom he had done so much, and from whom better things might have been expected. We may, however, fairly assume that those who acted towards Mr. Elliot in the manner we have stated were the most ignorant of the miners of the North, and were as incapable of judging of a man's character as they were of understanding the Mines Regulation Bill, or, in fact, any other Bill.

PROFITABLE MINING.—The dividends from two mines on the Comstock Lode, the Crown Point and the Belcher, have amounted to \$10,900,000 in the last ten months.

THE EXPORT COAL TRADE.—The exports of coal from the United Kingdom presented rather a substantial increase in January, having amounted in that month to 916,116 tons, against 799,227 tons in January, 1873, and 842,328 tons in January, 1872. France sustained, as usual, the largest share in last month's exports, having figured in the total of 916,116 tons for 240,528 tons; the shipments to France in January, 1873, were 206,217 tons, and in January, 1872, 253,630 tons. Our coal exports increased last month to Russia, Denmark, Germany, Holland, France, Spain, Italy, Turkey, Egypt, and Malta; but they decreased to Sweden and Norway, Brazil, and British India. In addition to the 916,116 tons of coal exported last month, 251,153

tons were shipped for the use of steamers engaged in the foreign trade in January. The value of the coal exported from the United Kingdom in January, exclusive of that shipped in the same month for the use of steamers engaged in the foreign trade, was 943,861/., as compared with 834,598/., January, 1873, and 469,628/., January, 1872.

PREVENTION OF NOXIOUS VAPOURS.

Although inconvenience has in some cases been caused to those connected with industrial undertakings by the infliction of somewhat heavy fines for permitting the escape of noxious vapours generated in the processes carried on by them, the ultimate result has frequently been peculiarly advantageous to themselves, and of general benefit by bringing some of the ingenious and important inventions into common use. One invention of this class worthy of special consideration is that now employed by Messrs. Hargreaves and Robinson, of the Atlas Chemical Works at Widnes, for the manufacture of salt cake (sulphate of soda) by the direct action of sulphurous acid upon salt, instead of by first converting the sulphurous into sulphuric acid, and then using the sulphuric acid to decompose the salt. They are, therefore, able to dispense with the costly and cumbersome vitriol chambers, salt-cake pots, and roasters. Rock salt can be used instead of common salt, and it has, in addition to its cheapness, several other advantages in its favour. The rock salt, finely ground, is first moistened with water, and laid on a heated floor to dry into hard flat cakes, about 4 in. or 5 in. thick; it is then broken by machinery and placed in cylindrical iron chambers, which in the Atlas Works are six in number, each of which is 10 ft. high. This is considered as merely an experimental plant, and some of the licenses of the process are preparing to erect chambers in sets of 12, each of which is 15 ft. diameter, and 12 ft. high, and containing, when full, nearly 400 tons of salt, to be treated at once. The sulphurous acid is passed through all the chambers in succession, and when the contents of one of the chambers are properly converted into salt-cake, that chamber is detached from the current of gas, emptied, and then re-filled with salt, and again exposed to the action of sulphurous acid. During this operation a large amount of heat is produced by the chemical reaction, which is really a case of combustion, in which the salt acts the part of a combustible, and the sulphurous acid, together with a little air and steam, act as an atmosphere by which the combustion is supported. The temperature necessary to carry on the reaction is in great part obtained by this act of combustion, and only a small proportion of fuel is needed to compensate for loss of heat by radiation; in fact, at one part of the operation the salt is liable to be melted by the heat produced by the reaction without the use of fuel. The proper controlling of this sudden elevation of temperature was at one time a very serious difficulty, but by persevering experiment it has been changed from a disadvantage to an advantage, by making it available in quickly raising the temperature of the newly-charged chamber.

Apart from its advantages in preventing the escape of the noxious vapours, the process of Messrs. Hargreaves and Robinson is carried on with a cheaper plant, and at a smaller working cost. The iron salt-cake chambers appear to be quite as durable as the old leaden vitriol chambers, 12 months constant use of the former giving no appreciable signs of wear. In carrying on the process both less labour and less fuel are required, and nitrate of soda is entirely dispensed with. In the old process the hydrochloric acid gas is not at all times condensed, so that whilst at one time mere traces of the gas would escape to the chimney, at another nearly one-third of all the gas would escape; and it often occurred that, in spite of all possible care on the part of the manufacturer, even when the plant is in good working order, there are leakages in the brickwork which allow the gas to escape direct to the chimney without going through the condensers at all, and there are not unfrequently instances where the workmen deliberately break openings between the gas flues and the smoke flues, so as to get a draught to keep the gas from coming in their faces when working at the pot or roaster. These openings may pass undetected for weeks together if closed during the day and only kept open at night. The manufacturer thus loses a large proportion of the acid which yields him his chief profit. It is claimed that by the new process the condensation is frequently as high as 99.9 per cent., and it is suggested that an alkali Act requiring the escape to be reduced to one-tenth of what the present Act allows could be enforced without disadvantage to the manufacturer. In Messrs. Hargreaves and Robinson's process the decomposition takes place in iron chambers made perfectly gas tight at all points coming into contact with the smoke flues, and if leakage should occur it would be from the smoke flues into the acid flues, thus taking the smoke from the fires through the condensers, in consequence of the more powerful draught being in the acid flues. The gas after leaving the chambers is mixed with steam from a jet which is used to create a draught through the apparatus. It flows in a constant and unvarying current towards the condensers, but first passes through a series of earthenware tubes, to cool it to a temperature of about five degrees above the atmosphere. The greater part of the acid is separated from the gas in these tubes, and being cold, the remainder of the acid is easily separated in the condenser with a much smaller supply of water than is needed in the old process. As the gas passes through the apparatus in an almost invariable quantity, it is easy to regulate the flow of water so as to wash all but the last traces of acid out of the gas, and yet get nearly all the acid solution strong. Instead of the condensation being worse at night it is better than in the day; this is in consequence of the atmosphere being colder at night, causing a greater amount of condensation in the earthenware tubes, and leaving a smaller quantity of acid to pass into the condenser, while the same quantity of water is passing through it as in the daytime. The water supply to the condensers remains unaltered very frequently for weeks together. The invention appears likely to be a great boon to all districts in which this class of manufacture is carried on, and will doubtless come largely into use.

DAMAGE FROM WATER.—In the Court of Exchequer Chambers, Westminster, before the Lord Chief Justice Coleridge and Justices Keating, Quain, Grove, Archibald, and Honyman, the case of Smith v. Fletcher was heard. It is a case involving a most important question to mineowners—as to how far a mineowner on a higher level is liable for damage of water which goes from his mine into his neighbour's on a lower level. The parties are iron ore miners in Cumberland, the defendant holding his on a higher level, and at the trial at Carlisle, in which the plaintiff sought damages, the plaintiff called witnesses to prove that in a flood in November and December, 1871, water had come from a brook which had been diverted by defendant into an open quarry working of defendant's, and thence it went down into his mine, and ultimately by percolation into the plaintiff's mine, and on the defendant's counsel proposing to show that the new brook was more capacious than the old, and that this was an extraordinary flood, against which he was not liable to the plaintiff, the learned judge prevented him holding that. The House of Lords had decided in a case of Fletcher v. Rylands that a mineowner was absolutely liable under all circumstances for damage done from water escaping from his mine and injuring his neighbour's. It was against this ruling that Mr. Holker, Q.C., M.P. (with him Mr. Kay, Q.C., and Mr. Baylis), appealed to the Court of Exchequer to enter a nonsuit for the defendant, or grant a new trial on the ground of misdirection. On the first point, he said that here the defendant diverted a stream in the usual way of running, had made it more capacious than it was before, and but for the extraordinary flood it would have carried off the way in the usual way. The defendant had also made a quarry to get the iron ore, and the flooded water getting in there had found its way into the plaintiff's mine, but these were all acts which defendant was entitled to do, and for which he was in no way responsible, according to the case of Fletcher v. Rylands. Mr. Herschell, Q.C., contended that as this water came into plaintiff's mine through the action of defendant in diverting the stream and making the quarry, and not naturally or in the ordinary working of the mine, that the defendant was liable in damages.—After an argument occupying nearly two days, the Court held that the learned judge had improperly rejected Mr. Holker's evidence, and it must, therefore, go to a new trial, with an intimation that the jury must find whether what was done or permitted to be done was in the course of the reasonable, ordinary, and proper mode of working the mine.

MANUFACTURE OF STEEL.—Mr. GALLEY, of Paris, has patented an invention which relates to a peculiar process and composition for obtaining cast-steel or steel of cementation of the best quality from ordinary iron, iron puddled with coke or with wood, puddled steel, Bessemer steel, cuttings of old steel, and in general all steels obtained directly either from the ore or from cast-iron. To obtain cast-steel of the best quality from the class of iron above mentioned, he proposes in general to employ a cement or composition composed of the following ingredients in about the proportions given:—Alumina, 0.50 to 1 part by weight; clay of a highly aluminous character, 12 to 20 parts by weight; powdered wood charcoal, soft, and lamp black, 50 parts by weight; carbonate of lime, 38 to 42; carbonate of potash, 18 to 30 parts by weight; carbonate of soda, 2 parts by weight; caustic potash, 0.50 to 1 part by weight; oxide of manganese, 4 parts;

resin, 4 to 5 parts by weight; common salt, 1 part by weight; sal ammoniac, 0.50 to 1 part by weight; borax, 0.5 to 1 part by weight; water about 10 per cent. of the weight.

TIN MINING IN CORNWALL.

There seems a prospect of the renewal of the attention of investors towards the development of the Cornish Tin Mines. We understand that a new company is about to be brought out, with an influential and experienced directorate, to work the New East Wheal Vor. Amongst the directors is Sir John MacLean, F.S.A., the author of a parochial history of Cornwall, entitled "The Deanery of Trigg Minor."

The directors have taken unusual pains to ascertain the value of the property previous to placing it before the public, having obtained the opinions of most of the principal mining authorities in the district. When we state that the purchase of the mine is recommended by Captain Harris (manager of Great Wheal Vor), Captains Pope, Nicholas, Richards, &c., it cannot be doubted that the required capital will be readily subscribed.

REPORT FROM CORNWALL.

Feb. 12.—There has rarely been a time when mining matters looked so uncertain, and to all casual appearance so unpromising as they do now. The most confident anticipations are entertained in all the quarters believed to be best informed that with the new year a new era of prosperity, steady, if not all at once brilliant, was to open upon our tin mines. We hardly expected that the events of 1874 would be repeated, and a rise in the standard take place upon New Year's day. But that a rise would take place very shortly afterwards was confidently looked for, and it was believed that associated with it would be a decrease in the price of that most serious item in our expenditure—coal. One-half of these expectations have, in some measure, been realised. There has been a drop in the cost of coal, very inadequate, it is true, to what has taken place in some other quarters, but still sufficient, had the standards remained as they were, to have put not a few mines into a very much better financial position than they now are. (It is fortunate, by-the-way, with coals at such exorbitant prices as have ruled, that the winter has been, comparatively speaking, a dry one.) But what was given with one hand has been more than taken away with the other. We have had fall after fall in the tin standard, until 10/., has been lopped off the market price in less than three weeks, and there is no assurance that the downward process has ended. How is this? It has been stated, and the idea is supposed to be borne out by the absence of official quotations, that the smelter's "ring" is broken up. Judging by results we should say just the contrary. There is a remarkable agreement among them in prices, and if there still is an understanding among them, as notwithstanding the absence of the quotations we are inclined to imagine, then it is plain that Cornish miners had better deal with an avowed combination than with a hidden one. An open fire is better than an abused any day. Not that we wish to speak of the smelters as the enemies, in any direct sense, of our mining. But they have their own interests to serve, and naturally they are paramount.

If they could always reconcile the highest profits to themselves with the greatest prosperity to mine adventurers, unquestionably they would be glad to do so. But they cannot, it would seem, and hence many of our present difficulties. We say many because the Australian tin has of late been an unknown quantity, which has baffled the calculation of well nigh everybody, and this cause of our fluctuations has hitherto been entirely beyond home control. It is said that the smelters have large stocks in hand. If so, one would rather expect to see higher prices rule, for they have never been credited with a desire to buy dear and sell cheap, though of course they must be influenced by the state of the general market. If their stocks are so large as is said, very probably we shall find them gradually working off directly the agitation and disturbance of trade consequent upon the elections is over, when the general tendency would of course, apart from and above all merely local influences, be in an upward direction. It is said that large quantities of Australian tin are coming home. As we stated last week, with prices as at present it will not pay to send home the tin which is being raised in that country, and, thanks to the telegraph, we are likely to have a tolerably sudden check put to the shipments. The Australian tin, therefore, it would seem may be pretty well left out of the calculation. The one thing to be guarded against now is panic. There are, unfortunately, premonitions that a condition of panic is impending, which, gloomy as things now are, would make them tenfold worse. There never was a time at which adventurers in mines required to be more careful in what they were about, and to avoid undue haste in their dealings, than now. May they take the hint.

FRIDAY NIGHT.—The continued depreciation in the Tin Standard is rapidly producing, we fear, the results which we must deprecate. Already it has been decided at Cook's Kitchen and West Frances to work only the most productive parts of the mines, and at North Roskear meeting to-day it was declined to consider the condition of the mine at a special meeting. The prospect is altogether most gloomy.

REPORT FROM SCOTLAND.

Feb. 11.—The Pig-Iron market has been very dull since the date of our last report. Last week the price fluctuated betwixt 100s. 6d. and 101s. 9d., closing at latter price on Friday. On Monday the market opened at 101s. 9d., and receded to 100s. 6d. Yesterday the opening price was 100s. 1½d., and a large business was done down to 97s. 3d., from which point there was a reaction, and the close was 98s. 6d. sellers, 98s. 3d. buyers. To-day the market was flat, with business from 98s. 6d. to 99s. 6d., at which it closed. The prices of makers' iron are very irregular.

SHIPMENTS.		
Week ending Feb. 8, 1873	Tons	10,537
Week ending Feb. 7, 1874	Tons	7,303
Decrease		3,234
Total decrease since Dec. 25, 1873		22,516
Imports of Middlesbrough pig-iron into Grangemouth:—		
Week ending Feb. 7, 1874	Tons	2,030
Week ending Feb. 8, 1873	Tons	670
Increase		1,360
Total increase for 1874		6,304

The reduction noted above in the price of pig-iron has yet had no influence on the Manufactured Iron Trade, the demand being still limited. In the meantime the machinery is kept going, and it is said some of the order-books are fairly filled. Still makers generally complain of the paucity of work, and offers to place at 5s. per ton under quotations cannot induce business. Sheets, which are to be advanced in the South, are quoted here without any hint of an advance. Melters are not much better off than they were when last noticed, the only new thing of consequence offering being tenders for the construction of two cast-iron water towers, 75 feet in diameter, for the Pelotas and Rio Grande Waterworks, in the Brazils. Machinists are reported busy. The firm of William King and Co., engineers and boiler-makers, South Kinning-place, Glasgow, has been dissolved, and Mr. William King will continue the business on his own account under the old firm, and pay all debts due by it.

Coals for shipment have undergone another reduction, and may be had (Wishaw Main) for 13s. 6d. f.o.b. here, and 14s. at Grangemouth; Ayrshire, 14s. at Troon or Ardrossan per ton. Household, with the sharp frost which has set in, is firmer, but the demand is only temporary and limited. The tendency of prices is downward, and a considerable reduction is expected shortly.

A beginning has been made (which is threatening to become general) for reducing miners' wages in the various coal districts from 6d. to 1s. per day. The miners are meeting it with the tactics which have been so successful of late, and are reducing the number of working days in the week and the number of hours per day in order to keep down stocks and keep up wages. This is being done in Stirling, Lanark, Fife, and Ayrshire, as well as in the Lothians, but this attempt to restrict the "darg" has its limits, and it is pretty evident that we have all but arrived at that limit. Of course, the miners have great faith in Mr. McDonald, and entertain a kind of

hazy belief that now he has become a member of the House of Commons he will be enabled, by some kind of means, which they do not well understand, to accomplish for them all that their hearts may desire. In the House of Commons Mr. McDonald's utterances will have to be regulated by "truth and soberness," as Mr. Whitlaw (of the Gartsherrie firm) will be able to sift his wheat, and drive the empty chaff away.

On Monday Mr. McDonald met the miners in Conference here, and was welcomed with great cheering. The Larkhall men are to give 100% to defray his expenses; Annbank, 10%, and Mayhill people are to contribute 1s. a head for the same purpose. Mr. McDonald is not in any sense a "working man," but he is to get paid for representing his constituents in the British Parliament. It is thought here that the electors are likely to get soon weary of paying for what they can get "without money and without price." [Mr. McDonald's address is given in another column of this day's Journal.]

At the Association of Engineering and Shipbuilding Draughtsmen a paper was read by Mr. F. Ruthven on the "Hydraulic Propulsion of Vessels," and proved most interesting. In the course of his remarks, Mr. Ruthven referred to the trials and experiments made with various vessels, mentioning, as a particular case, Her Majesty's gunboat Waterwitch. Though at the present time not much is heard about her performances, yet a few years ago great interest was taken in her. Mr. Ruthven strongly advocated "hydraulic propulsion," which, in his opinion, would effect a vast saving in fuel, &c., and prove a most desirable motive-power in war-ships, from the facility with which a vessel so propelled can be handled in the water. A very lively discussion followed, and the meeting closed with votes of thanks to Mr. Ruthven for his able paper, and to the Chairman.

The miners in the employment of Grangemouth Coal Company have struck work. They had received notice of a reduction of 6d. per ton upon the short draws in two pits, and intimation that they must work ten days per fortnight of eight hours a day, in place of continuing their present system of a restricted "darg," which, at 4s. 8d. per ton, yields them 8s. 3½d. per day. The price of coal in Grangemouth has been reduced from 17s. 6d. to 16s. per ton.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Feb. 12.—The Iron Trade of South Staffordshire has not undergone any important change since our last report. Common sheets have been pressed for sale at 1½d. per ton, and numerous transactions at that figure have taken place; but best sheets are firm, and other classes of finished iron are steady, at about late rates. Bars are quoted at 14½d. 12s. 6d. for Earl Dudley's brand, 14½d. for B B H, 13½d. for medium, and 11½d. 10s. to 12½d. for common makes. The price of rods, hoops, strips, plates, and angles is in proportion to this standard. Galvanised roofing sheets are in steady request, chiefly on account of the colonial markets. The pig-iron makers quote best brands of native, all mine, firm, at 7½d. 10s., part-mine being 5½d. 10s. to 6½d. With regard to common pig, prices are undoubtedly weaker.

The South Staffordshire Coal Trade is firm as regards prices of best coal, but the demand is not buoyant. The consumption at the iron-works is restricted by the slackness of trade, and the consequent short time at the mills and forges. Forge coal is 14s. to 18s. per ton, and other samples in proportion. Limestone has advanced this week 6d. per ton, to cover the wages concession just granted to the limestone miners. Satisfactory progress is reported with regard to the Sandwell Park trial sinking and the Huntington (Cannock Chase) trial boring, and confident hopes are entertained of the ultimate success of both enterprises. Some small firms are seeking orders for second quality coal at 4s. per ton under prices ruling two months ago.

The quotations for stocks and shares in local coal and iron companies are as follow, on the Birmingham Exchange:—Chillington Iron, 7½d. sellers; J. Bagnall and Sons (Limited), 9½d. sellers; Patent Nit and Bolt, 3 prem. buyers; Sandwell Park Colliery (Limited), 110 paid, 270; Cannock and Huntington, 4 prem.; Patent Shaft, 7 prem. buyers; Pelsall Coal and Iron, 20½d.; Muntz's Metal, 14½d.

In the North Staffordshire district the iron trade is less active than last described, and a more restricted output at the mills and forges will be inevitable unless matters very soon improve. The current demand is chiefly on home account, and comprises the smaller sizes of bar-iron, and also ship and boiler plates. Stocks of pig-iron are low. Ironstones are in steady request at about late rates.

The hardware trades of the Black Country are, as a rule, steady, although the buoyancy of demand is not conspicuous in the leading branches. The ironfounders are well engaged on orders for chilled rolls and other mill and forge machinery. It is understood that some large orders are in the market for wrought-iron work for engineering and such like purposes, and that there is a prospect of them being placed in this district. The iron tube trade is only moderately brisk, but the leading firms have a fair supply of orders. An important stimulus to the manufacture of steel tubes is likely to be given by the introduction of that class of tubes for locomotive boiler purposes. The agitation for a wages advance in the wrought nail trade is likely to terminate in favour of the workpeople, and the selling quotations for that class of produce will be advanced in proportion. The marine ironwork trade on the Dudley side of the district is fairly active, but the manufacturers continue to complain of the high price of material and fuel, and the stringent restrictions recently imposed by the Legislature in regard to the testing of chain-cables and anchors.

The directors of the Ivy House and Northwood Colliery Company (Limited) have declared a dividend at the rate of 10 per cent. per annum, free of income tax, and a bonus of 10s. per share, making the dividend equivalent to 20 per cent. for the year.

REPORT FROM MONMOUTH AND SOUTH WALES.

Feb. 12.—Up to this date the excitement resulting from the election contests seems rather to heighten than diminish. For the past ten days electioneering matters have absorbed nearly all attention throughout the Principality. In the great ironmaking districts of Merthyr and Aberdare capital and labour had a direct contest, but the latter was defeated. Mr. R. Fothergill, who was first elected to Parliament in 1868, has made himself very popular in South Wales for his constant and able advocacy in the House of Commons of the superior qualities of South Wales steam coal, and there is no doubt that to his and Mr. Dillwyn's exertions is owing, to a large extent, the prosperity of the South Wales coal trade during the last few years. Mr. Fothergill is one of the most extensive owners of iron and coal works in South Wales, and as he is a Liberal in politics also, it is not very surprising that he was returned by a considerable majority over Mr. Halliday, the labour candidate. But it may be mentioned that the working men were not united in their choice, a large section having selected another Union leader, and because he was not brought forward with their support altogether. Mr. Poehin, who has large stakes in several iron and coal works in Monmouthshire, and who contested the Monmouth boroughs in the Liberal interest, was defeated; Mr. Cordes, one of the proprietors of a nail factory at Newport, having been returned by the Conservatives.

Sir Ivor Guest, the principal proprietor of the Dowlais Works, one of the largest establishments in the world, has contested the county of Glamorgan in the Conservative interest, but the result of the polling, which took place on Wednesday, was not made known up to the time of writing. It is not surprising, therefore, seeing how closely connected with the elections the masters and workmen are and have been, that very little has been done in the way of trade. In regard to the iron trade, it cannot yet be said that there is any appreciable change, though there have been signs of a slight movement in the enquiry for rails, but it was not followed up by the placing of orders. Probably, however, when the elections are all over, and makers can again turn their attention to business, there will be some revival in the trade generally. In the course of another week or two Russian orders for railway iron are expected to begin to come to hand. The iron exports during the past week have been exceedingly small, having only included 420 tons of rails to Santos, 135 tons to Madras, and 300 tons of bar and trundle iron to Smyrna. The position of the Tin-Plate Trade has not altered to any extent for the last three or four weeks.

There is but little change to be noticed in the Coal Trade. The demand for steam qualities has continued steady, but owing to the irregular working of the collieries supplies have been short, and the quantities cleared to the foreign markets have lessened in proportion. Old quotations are still adhered to. The cold weather which has prevailed for some days has caused a little morosity in the house coal trade, but of late the colliers have been on very

short time; sellers have, however, evinced no disposition to reduce quotations. The exports of coal from the leading ports of the district during the first month of the year were large, and showed a considerable increase over the corresponding month of last year. The iron exports during the month did not reach half the average.

The election contests have caused much rioting in that celebrated district, the Rhondda Valley, and the military had to be called from Newport to restore peace.

The directors of the Taff Vale Railway Company have determined to recommend a dividend at the rate of 10 per cent. for the last half-year, with a bonus of 1 per cent.

TRADE OF THE TYNE AND WEAR.

Feb. 12.—The Coal and Coke Trades are very quiet at present, the supply being generally pretty nearly equal to the demand. The steam coal trade continues very healthy, and a good business is still done in best Northumberland steam coal. Best house and gas coal also still commands a good price, but inferior and manufacturing sorts are plentiful, and can be had in many cases at reduced prices. However, further reduction in the price of coals and coke need not be looked for here at present, as contracts have been entered into in a great majority of cases for the supply of coals during the present year at current rates.

The Redheugh Estate, on the west side of Gateshead, has been leased by a company, with a view to work the minerals, and two shafts are to be sunk immediately. The upper seams have been worked from the earliest times, but the lower seams, including the Beaumont and Brockwell seams, are expected to be found entire. The Brockwell seam produces excellent coking coal, and the Beaumont good house coal. One of the shafts at the new winning on the Deckham Hall Estate, south of Gateshead, has been got down to the first seam; it has, however, been worked by the old men, and the shafts will be sunk further, when it is expected some seams will be found unworked.

The local elections are nearly completed, and liberals have, with only one exception (if Mr. Hamond's return for Newcastle-on-Tyne can be called an exception), been in all cases returned. As we anticipated, the struggle in North Durham has resulted in the return of the Liberal candidates, Mr. C. M. Palmer and Mr. I. L. Bell by considerable majorities, and the defeat of the late members, Mr. G. Elliot and Mr. Pemberton, of Sunderland.

Mr. Thomas Burt, the recently-elected member for Morpeth, and Major Duncan, the Conservative candidate in the contest, accompanied by one or two other gentlemen, visited and explored Cambos Colliery, which is situated about two miles north of Blyth, and is one of the most admirably arranged and well-conducted mines of the North.

The Iron Trade continues very quiet, partly owing to the attention of most people being entirely absorbed by the elections, but it is quite apparent that the demand for finished iron is very weak, and, consequently, prices of all kinds of iron have given way. Pig-iron and iron of all kinds can be had this week on easier terms, and lower rates are pretty certain to prevail for some time to come.

NORTH OF ENGLAND INSTITUTE OF MINING AND MECHANICAL ENGINEERS.—A general meeting will be held on Saturday, when a paper will be read by W. G. A. Lebour, "Notes on Further Researches in the Natural Pits of Hainaut, with Remarks on their probable Origin." This paper, and Mr. J. B. Simpson's "On Natural Shafts in the Coal Measures of Belgium," will then be discussed, and Mr. Simpson will state some new facts which he has obtained in relation to the subject. Mr. W. Frederick Hurd will read a paper "On Hurd and Simpson's Patent Air-Compressing and Self-Acting Coal-Cutting Machinery for Straight Work, Long Wall and Pillar, and Stall Work," which will be illustrated with drawings and models. The following papers will be open for discussion:—"On a Differential Expansion Pumping Engine," by Mr. Henry Davy; "On a New Description of Safety-Lamp," by Mr. Emerson Bainbridge; "On the Combustion of Coal Gas to Produce Heat," by Mr. John Wallace; "On Raising Coal from great depths by Atmospheric Pressure," by Thos. Wood Bunning. [A full report of the proceedings, which are expected to possess much interest, will be given in next week's Journal.]

REPORT FROM LANCASHIRE AND CHESHIRE.

Feb. 12.—At Burnley, yesterday, two cases of conspiracy were before the magistrates; George Riley, of Platt Bridge, Wigan, sub-treasurer of the Amalgamated Association of Miners (who is already committed for trial, along with Mr. Halliday and others) and Joseph Hargreaves, mining agent, of Burnley, being charged with offences similar to those alleged in the previous case. Mr. Leresche, barrister, prosecuted on behalf of the executors of J. Hargreaves, and Messrs. Richardson and Bramwell, of Manchester, were for the defendants. The evidence of two Cornishmen was to show that the defendants had caused them, in violation of contract, to leave work, and had paid their fares home. The defence submitted that there was not a shadow of a case made out, inasmuch as the contract was broken before the Cornishmen even saw the defendants, and therefore before the defendants could conspire to induce them to leave Hargreaves's employ. The defendants were committed for trial at the Assizes.

These cases, when they come on for trial, will, no doubt, excite a very great amount of interest, not only in the coal trade, but in every industrial district. I hear that the association will spare no cost whatever in obtaining the services of the most eminent counsel, in order that a complete understanding as to the law on the subject may be had.

The coal returns for January show an extraordinary decrease, the difference being 90,727 tons in favour of December. The quantities sent from the Wigan district are set forth below:—

No important change in prices has to be reported this week, but rates have a steady downward tendency. There is a great deal of stacking going on, especially of inferior sorts.

At Chorley, on Wednesday, the Wigan Coal and Iron Company prosecuted two miners for firing a shot contrary to orders, and causing a serious explosion, resulting in serious injury to the defendants, and endangering the lives of others. Mr. Barlow (from the office of Mr. Peace, secretary to the company) prosecuted, and asked the magistrates in their decision to have regard to the physical suffering the defendants had undergone through their recklessness. A fine of 20s. and costs was imposed.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Feb. 15.—The mining districts between Chesterfield and Sheffield were in an excited state during the early part of the week consequent on the election for East Derbyshire. One of the candidates was Mr. W. Fowler, the chairman of the Sheepbridge Coal and Iron Company, the pits belonging to whom put out about 10,000 tons of coal a week. There are five blast-furnaces, together with mills, foundries, &c., so that profitable employment is found for a vast body of workmen. Mr. Fowler, who is a man of great energy, established the works with which he is connected, and raised a small town of 6000 inhabitants on a spot that 18 years ago was nearly green fields. He, however, to the loss of the mining interest, lost his election by a small majority. Trade has been very quiet at most of the collieries, and a considerable less tonnage of coal has been sent to London of late than there was up to the close of last year. At Clay Cross the miners have resumed work after a short strike, having accepted the reduction of 3d. per ton for getting. A commencement thus made is likely to be followed at other places, for the question of a general reduction of wages is now being discussed in several districts. Prices of coal have come down very much, and are now lower than they have been at any period during the last 18 months. On Feb. 15 last year the price of the best coal, delivered in London, was 52s. per ton, whilst it is now only 35s., so that there has been a reduction of 17s. per ton, whilst the miners' wages between the two periods has considerably increased. This is a state of things not likely to last much longer, although the men, as a rule, would prefer working only three or four days a week rather than submit to a reduction of their wages. The iron trade of Derbyshire continues in a healthy state, there being no falling off in the number of furnaces in blast, whilst the demand for some qualities of iron has slightly improved.

Although some of the Sheffield trades are not at all active, still the business tone is better than it has been since the commencement of the year. The armour-plate mills are now running very well, a good deal of that rolled being for the Continent. Some of the steel makers are by no means busy, but there is a steady business being done in malleable castings, rails, and Bessemer material. The South Yorkshire coal trade has been quiet for some time, and prices of both steam and household qualities have fallen from 1s. to 2s. per ton. At several collieries the men have only been working four days a week on average, and there is not much prospect of any material change for the better. The demand

for Silkestone and other coals for the metropolis has been very quiet, and there is, therefore, no reason why prices on the Exchange in London should have increased as they did on Wednesday. Sidings and depots are blocked at several places with loaded waggons, whilst at many collieries all work is stopped in consequence. The exports from the Yorkshire ports, as well as from Grimsby, are much as they have been. Gunpowder, or rather blasting, is being done away with at very many collieries, and during the week arbitrations have taken place as to the wages to be paid for bringing the coal down by wedging in lieu of powder. Increased safety appears to be the object of the men, but coalmasters have to pay a much higher amount in wages for the change.

At the election of members for the south-west division of the West Riding of Yorkshire Mr. W. S. Stanhope, a large mineral proprietor, was returned at the head of the poll. Mr. Stanhope is the lessor of the Silkestone coal at the Furnace Main, as well as in connection with other collieries, and was a member of the Select Committee on Coal which sat last year, as was also Alderman Carter, who headed the poll for Leeds.

COALS.

CONTRACT DEPARTMENT, ADMIRALTY, WHITEHALL, S.W.
7th February, 1874.

TENDERS will be RECEIVED on THURSDAY, the 20th inst., until Two o'clock P.M., for the following quantities of LAND ENGINE COALS, viz.:

CHATHAM	14,000 tons.
SHEERNESS	4,300 "
PORTSMOUTH	11,000 "
DEVONPORT	7,700 "
PEMBROKE	1,400 "

Their Lordships do not bind themselves to accept the lowest or any tender, and reserve to themselves the power of accepting any part of a tender.

Forms of tender, containing all particulars, may be obtained at this office, on application, either personal or by letter.

FRANCIS W. ROWSELL,
Superintendent of Contracts.

Sale of Iron Cuttings, Punchings, and Turnings, at the Royal Arsenal, Woolwich.

WAR OFFICE, 5, NEW STREET, SPRING GARDENS,
6th February, 1874.

NOTICE IS HEREBY GIVEN, that the Secretary of State for War will be prepared to RECEIVE TENDERS for the PURCHASE of such IRON CUTTINGS, PUNCHINGS, and TURNINGS as may be for disposal during a period of three years, commencing from 1st January, 1874, at the Royal Arsenal, Woolwich, where forms of tender and all information may be obtained, on application to the Controller.

The Tenders are to be delivered at the War Office, 5, New-street, Spring Gardens, S.W., on or before Thursday, 19th inst., addressed to the Director of Contracts, and marked on the outside "Tender for the Purchase of Iron Cuttings, &c., Woolwich."

THOMAS HOWELL,
Director of Contracts.

THE CANADIAN LEAD MINING AND SMELTING COMPANY (LIMITED).

WANTED, an EXPERIENCED MINING CAPTAIN, to TAKE CHARGE of the WORKING and DEVELOPMENT of the COMPANY'S MINES in CANADA. Some knowledge of smelting is desirable. Applications, stating salary required, accompanied by testimonials, must be addressed to the Chairman of the company, on or before the 28th inst. 20, St. Helen's place, London, 2nd February, 1874.

WANTED, by an EXPERIENCED FOREMAN, a SITUATION as FOREMAN or TIMEKEEPER in some of the COAL and MINING DISTRICTS. Good references. Address, "W. J.," MINING JOURNAL Office, 26, Fleet-street, London.

ENGINEER.

WANTED, TWO DRIVERS, accustomed to HAULING or PORTABLES. Apply to T. R. WINDER, Esq., Pentewan, St. Austell, Cornwall.

WANTED, a MINING ENGINEER, for some PHOSPHATE DEPOSITS in the SOUTH OF FRANCE. Full particulars to "A. A. A.," Commercial Sale Rooms, Mining-lane, E.C.

WANTED, a SITUATION as MANAGER of a SMALL, or UNDER-MANAGER of a LARGE, MINING ESTABLISHMENT. The applicant has had several years' experience in the direction of mining works in Spain: has a fair knowledge of French, and a thorough knowledge of Spanish. Address, "W. J.," care of Mr. J. H. Neale, No. 6, Great George-street, Westminster, S.W.

TO CAPITALISTS.—A GENTLEMAN is PREPARED to DISPOSE of his LEAD MINE, or an INTEREST therein, to one or more capitalists. Although already opened out sufficiently to return on one spot alone at the rate of 25 to 30 tons per month, the mine is yet in an undeveloped state, and is of a class and nature to warrant the opinion that it must inevitably and shortly become one of the most valuable mines in the United Kingdom. Gentlemen of substantial means only, or their solicitors, are invited to apply. Address, "Lead," care of Messrs. Philpott Brothers, 65, King William-street, E.C.

NORWAY.

THE ADVERTISER has resided many years in NORWAY, and is thoroughly conversant with the language, mining laws, and customs. He offers his services to gentlemen desirous of reliable information regarding Norwegian Mining Properties offered for sale, and can supply photographs, surveys, &c., if wished, to accompany his reports. Has a party of experienced miners in his employ provided with the necessary plant to make extended trial holes, procure genuine average samples of minerals, &c. Unknown correspondents are respectfully requested to supply a London or other satisfactory reference. Address, Mr. THOMAS M. WILSON, C.E., Bergen, Norway.

A GENTLEMAN, with ten years' practical experience in the successful exploration and management of Australian and New Zealand Gold Mines (quartz and alluvial), is prepared to REPORT UPON or SUPERINTEND the DEVELOPMENT of MINES or MINERAL LANDS. Testimonials and references to be addressed "Alpha," care of A. Lee, Esq., Solicitor, 12, Gray's Inn-square, E.C.

A GENTLEMAN, who has had many years experience in Colliery Business and Mining, is OPEN to an ENGAGEMENT as SECRETARY, and COMMERCIAL or GENERAL MANAGER, or as MINERAL ESTATE AGENT or MINING ENGINEER. Address, "M. E.," care of Davies and Co., Advertising Agents, Finch-lane, Cornhill, London.

TO DIRECTORS OF MINING COMPANIES, AND PROMOTERS.

A FIRM OF POSITION, in the heart of the City of London, having considerable experience in the Management of Companies, are prepared to UNDERTAKE the entire SECRETARIAL DUTIES of one good company, and find the use of offices, clerks, &c., for a fixed inclusive annual charge. This is a favourable opportunity for an established company desirous of reducing its expenses, or for a new company starting upon an economical scale. Address, Secretary "A," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

THE OWNER of a COAL MINE desires to communicate with one or more CAPITALISTS, for the purpose of FURTHER DEVELOPING the PROPERTIES of the MINE. A promising investment, and good returns assured. Address, "A. H. B.," care of A. H. Bailey and Co., 3, Royal Exchange-buildings, London, E.C.

ON SALE, TWO HUNDRED AND FIFTY BRYNKINALE COAL MINE SHARES, or less number: 45 shares fully paid-up. Colliery situated in the NORTH WALES. Output 550 tons per week; two new shafts sinking. Will complete 1000 to 1200 tons output expected. A GREAT BARGAIN. Offer wanted. Address, Mr. A. WESTON, 2, Victoria-street, Manchester.

PEAT-PEAT.

FOR SALE, TWO THOUSAND ACRES OF PEAT, of great depth, and of the finest vegetable quality. Near to railway communication with all parts. Apply to Mr. GEORGE T. CHALLEN, 5, Crown-court, Old Broad-street, E.C.

EAST BALLESWIDEN TIN MINING COMPANY (LIMITED). Notice is hereby given, that the SEVENTH QUARTERLY DIVIDEND, at the rate of EIGHT PER CENT. PER ANNUM, will be DUE and PAYABLE at the offices of the company, Crosby Hall Chambers, Bishopsgate-street, London, on the 19th instant. By order, G. V. MORGAN, Secretary.

NEW QUEBRADA COMPANY (LIMITED).

Notice is hereby given, that an ORDINARY GENERAL MEETING of this company will be HELD at the City Terminus Hotel, Cannon-street, on TUESDAY, the 2nd March, 1874, at One o'clock P.M., for the purpose of receiving the directors' report, with balance sheet, and statement of accounts; for the election of directors and auditors, and for transacting the ordinary business of the company. And notice is hereby further given that the Transfer Books of the Company will be closed from Wednesday, the 13th February, to Tuesday, 3rd March, 1874, both days inclusive. By order of the Board, T. G. GILLESPIE, Secretary.

11, New Broad-street, London, E.C., 13th February, 1874.

MESSRS. CAMERON AND CO., FINANCIAL AGENTS AND SHARE BROKERS, BRIDGE STREET CHAMBERS, CHESTER.

THE KEHELLAND CONSOLS COPPER MINING COMPANY (LIMITED).

Capital £24,000, in 12,000 Shares of £2 each.

First issue of 3000 Shares.

DIRECTORS.

JOHN RULE DANIELL, Esq., Camborne, Cornwall.
T. S. G. KIRKPATRICK, Esq., Oxford and Cambridge Club, Fall Mall; and 38, Eccleston-square, S.W.
THOS. H. POTTER, Esq., High Beech, Essex.
ARTHUR UPTON CHALLINOR, Esq., Hanley, Stoke-upon-Trent.
JOHN FRANCIS STAINES, Esq., M.D., Southampton-street, W.C.

BANKERS.

Messrs. TWEEDY, WILLIAMS, and CO., Redruth, Cornwall; and their London Agents, Messrs. GLYN, MILLS, and CO., Lombard-street.

SOLICITORS.

ROBERT WOOD LOCKWOOD, Esq., 20, Park row, Leeds.
LONDON AGENTS—Messrs. NORRIS, ALLENS, and CARTER, 20, Bedford-row, W.C.
RESIDENT MANAGER—Mr. W. R. PUTTER.

BROKERS.

Messrs. CHAMBERS and Co., 5, Southampton-buildings, Chancery-lane, SECRETARY—Mr. CHARLES S. DAVIES.

OFFICES (pro tem).

5, SOUTHAMPTON BUILDINGS, CHANCERY LANE, W.C.

The object for which this company is formed is the developing a piece of ground situated in close proximity to some of the most productive and celebrated mines in the world.

The "Investor's Guardian," of Feb. 7, says—"The ground selected for operations is a set of some extent to the north-west of the celebrated West Seton and Wheel Seton Mines, and, as is well known, the Camborne mining district is one of the most productive in the world. A tabulated statement of seven of the principal mines in that district, showing the amount expended and the dividends returned, proves that an expenditure of much less than £200,000 has given more than £2,000,000 in returns. From the general character of the district, and the particular indications in the set itself, there is fair probability of the Kehelland Consols turning out a great mining prize. This anticipation is borne out by the reports of many of the best mining captains and authorities in Cornwall."

Capt. Rutter, of Roskear, Camborne, says—"This set may be regarded as an extension of the northern run of mines of this district—the Wheel Setons and Roskears—which have already paid such large profits." Capt. Edwin Hoskin, of Poole, says—"I have no doubt you will have a profitable mine." Capt. Joseph Michell says—"Without a doubt on my mind it will turn out a great prize." Capt. W. C. Vivian says—"There is more than the ordinary probabilities connected with new mining ground in favour of a good discovery of copper being made." Capt. Josiah Thomas, of Dolcoath Mine, says—"I consider it to be a speculation of a promising character, presenting good chances of copper ore being met with at an early period." Capt. Wm. Rowe, of West Fray, says—"That those who take an interest in the concern, and see that their money is legitimately and economically expended, will be amply rewarded." Capt. James Pope, of Redruth, says—"Such a piece of mining ground as this can seldom be met with in Cornwall, and I can safely recommend it as a good speculation to any company of gentlemen inclined to speculate in mining."

Messrs. Chambers are empowered to offer to the public 3000 shares of £2 each, fully paid up, in this company. They can most strongly and confidently recommend investment in these shares, the reports being of such an exceptionally favourable character, and from the most experienced and respectable mine agents in the kingdom.

Prospectuses and forms of application to be obtained from Messrs. Chambers and Co., 5, Southampton-buildings, Chancery-lane, W.C.

THE NEW EAST LOVELL TIN MINING COMPANY (LIMITED).

Incorporated under the Companies Acts, 1862 and 1867.

Capital £15,000, in 6000 shares of £2 10s. each.

Deposit..... 10s. per share.

Calls..... 5s. per share on allotment.

And the balance as required in calls of 5s. per share at intervals of not less than three calendar months respectively from allotment.

Subscribers wishing to pay in full may do so under a discount of five per cent. Directors to be chosen from the general body of shareholders at the first meeting, the qualification being not less than 100 shares.

MANAGER.

Mr. CHAS. BAWDEN, St. Day, Cornwall.

SECRETARY (pro tem.)

Mr. HENRY HIRST, 10, High-street, Camden, London.

BANKERS.

Messrs. TWEEDY, WILLIAMS, and CO., Redruth, Cornwall.
Messrs. GLYN, MILLS, and CO., London.

PROSPECTUS.

This company is formed for the purpose of working the tin property described in the accompanying reports, and which is held under leases for the unexpired term of 15 years, at a royalty of 1/20th.

This mine is situated in immediate proximity to mines of established value for tin in the Wendron district, Cornwall, and in highly congenial granite. The East Lovell Tin Mine lies immediately west, and The Lovell immediately south-west of the New East Lovell Mine. The lodes in these two mines are reported by Capt. Nancarrow and Quentrell respectively to be worth £200 and £280 respectively per fathom at the lowest point reached in each mine. East Lovell, on an expenditure of about £2500, has returned £25,000 in dividends; and The Lovell, which has only been worked for about three years, is already paying large dividends.

The property proposed to be purchased is only divided from the above mines by a stream, which runs between the granite hills nearly north and south, and is about 600 fms. in length by 420 fms. in width. The principal lode opened upon is termed a "carbonate," and as far as worked is quite 15 ft. wide, and, although only sunk to the depth of 6 fms. from the surface, has already produced some 500 tons of tin-stuff, of an average of about 20 lbs. of tin to the ton of stuff, but improving in depth, as the stuff last raised was worth 56 lbs. to the ton. Another lode, 5 ft. wide, has just been cut, producing tinstone throughout.

There is ample water power for dressing and other purposes connected with returning the tin to market, and in the adjoining mine (The Lovell) this water is used for crushing and pumping; but, as in the summer it sometimes runs short, it is considered better to have steam-power.

All that is now required to bring the New East Lovell into immediate profit is to erect stamps, and an engine for driving the same, and also for pumping and drawing, and to complete the dressing-floors, the cost of which is estimated at £3500.

It is asserted by high authorities that the carbonate found here is the top of one of those great and rich deposits of tin for which this district is so famous, and that the cost of developing it will be small when compared with the results anticipated at a shallow depth. Under these circumstances the proprietors, who have laid out a large sum in sinking shafts and opening up the ground, have agreed to dispose of the property, plant, and tin already raised to the company for the sum of £4000, all of which they elect to take in fully paid-up shares in the company, thus evincing their entire confidence in the future of the mine. Their object in selling is to raise additional capital and avail themselves of the superior advantages of working the mine under the Limited Liability Act.

Assuming that at first only 32 tons of tinstuff are raised and crushed per day, this for 300 working days in the year would give 9600 tons per annum, and taking the ore to be equal only to 22 lbs. of tin to the ton of stuff, or about 1 per cent., this would produce upwards of 94 tons of tin per annum, which at the present price of £70 per ton, would be worth £6580. After deducting the expenses of returning this tin to market, including royalties and general expenses, there would still be sufficient to pay dividends at the rate of 15 per cent. per annum on the total capital of the company. As the raising of ore and the stamping power are increased, the profits will probably increase in a still greater proportion, as all the fixed charges would remain stationary. It should be borne in mind that the above estimate is based on a price of tin quite £20 per ton less than the price which prevailed eighteen months ago.

It is intended to give the option of forming a board of directors to the shareholders at the first meeting, to be held in London, the qualification being 100 shares, thus securing for the executive such persons as are likely to feel an interest in the welfare of the mine, and, consequently, the shareholders.

A plan and section of the mine and a copy of the Memorandum and Articles of Association can be seen at the manager's office, where also, and of the secretary and bankers, prospectuses can be obtained.

Applications for shares, by letter, accompanied with the deposit of 10s. per share, must be made to Mr. CHARLES BAWDEN, St. Day, Cornwall; the secretary, 10, High-street, Camden, London; or the bankers of the company.

REPORTS.

West Gwilt Mine, Jan. 17.—In accordance with your request I beg to hand you the following report of my inspection of the above mine. The set is about half-a-mile in length, and the same in width; it is situated in the well-known tin producing district of Wendron. It is bounded on the west by East West Lovell, where they have a lode of tin worth from £250 to £300 per fathom. On the south and west it is bounded by The Lovell, where there is at the present time the richest bunch of tin in the county for the depth. There are several lodes in the set, intersected by a cross-course; seven of these lodes have been opened upon. Their present operations are confined to the sinking of a shaft in the central part of the set, where there is a lode 14 ft. wide, and no north wall, which is tiny throughout, and in every foot they are sinking it is improving, and showing signs that will, I believe, ultimately lead to a rich bunch of tin, judging from the discoveries they have made in the adjoining mines, as the backs were similar in character. In conclusion, I beg to remark that I was much pleased with the prospects of the mine, and seeing the fine champion lode that is now being wrought on at such a shallow depth, and contiguous to the mines that have produced such rich bunches of tin, I consider it a mine of very extraordinary promise, and one, in my opinion, that will, in a very short time, amply repay the fortunate shareholders for embarking in such an undertaking. JOHN MAYNE.

The Lovell Mine, Jan. 16, 1874.—I have, according to your request, examined this mine, which is situated to the east, and adjoining East Lovell, and The Lovell rich mines; the lodes of Old West Lovell, East Lovell, and The Lovell pass through the set, which lodes have been, and still are, the most productive of the district. It is in the same geological formation, and is traversed by similar cross-courses as the mines named, where the lodes are now valued at from £250 to £300 per fathom. There are seven lodes discovered in the set, three of which have been opened on as deep as the water will admit; they are from 4 to 5 ft. wide, and will produce tin throughout. On the north lode, or carbonate, a shaft is being sunk 6 fathoms below the surface; here the lode is 14 ft. wide, and improving in quality as they sink. I broke samples from the bottom which gave a produce of 2 qrs. of

black tin to the ton of stuff; this I consider to be a good average. Any quantity of this quality stuff can be taken away at a very small cost, and I strongly recommend the immediate erection of stamping power. I beg to say that after due and careful consideration of the prospects presented that it cannot fail to amply remunerate the shareholders for the required outlay, it being a *fine simile* to the great deposit of tin now being wrought in this mine (The Lovell).

EDWARD KEMP THORNE.

TO CAPITALISTS, FINANCIAL BROKERS, & OTHERS.

THE OWNERS OF AN EXTENSIVE MINE IN CORNWALL wish to arrange with one or two Gentlemen who will JOIN in FORMING a COMPANY TO WORK IT. The property is supplied with machinery and every modern appliance for making large monthly returns. There will be ample margin for anyone floating a company.

Full particulars can be given on application to Mr. WARWICK, 25, Bucklersbury, London, E.C.

TO COLLIERY OWNERS, AND OTHERS.

TO BE SOLD (cheap), a FIRST-CLASS SECOND-HAND SINKING ENGINE, having a pair of 8 in. cylinders, with winding drum, complete.

For full particulars and prices, apply to ROBEY AND COMPANY (Limited), Engineers, Lincoln.

SILVERINE—THE NEW PATENT ALLOY.

TO BE SOLD, THREE HUNDRED AND SIXTY (fully paid) SHARES IN PIRCH'S SILVERINE COMPANY.

Apply to "V," 190, Edgware-road.

TO INVESTORS.

TWO SPLENDID OPPORTUNITIES SUCH AS ARE SELDOM MET WITH—the one, a COTTON SPINNING CONCERN, ready for IMMEDIATE WORKING, and stocked with the most VALUABLE MACHINERY, principally new; the other, a LARGE IRONMONGERY BUSINESS, at present and for the past 22 years in ACTIVE TRADE, and which has always realised very large profits—ARE NOW OFFERING.

Sound file investors only are invited to apply for interests therein. Adventitious investors, speculating with the object of receiving promotion money, will not be treated with.

Those only who desire to secure a permanent income on a moderate investment, need apply personally, or address by letter—

MR. HALLAS, PUBLIC ACCOUNTANT, 32, FAULKNER STREET, MANCHESTER.

Who will furnish the fullest information, and to probable investors furnish letters of introduction to view the properties.

BARYTES (SULPHATE OF), CRUDE OR GROUND, FOR SALE.

Apply to FORCE CRAG LEAD AND BARYTES MINING COMPANY, 60, Close, Newcastle-on-Tyne.

RAILS (IRON) FOR SALE.

NEW PERFECT FLANGE RAILS, 40, 60, 72, 74, and 75½ lbs. per yard; also, SLIGHTLY DEFECTIVE FLANGE RAILS, 40, 50, 72, and 74 lbs. per yard.

For particulars and prices apply to W. G. FOSSICK, 6, Laurence Pountney-hill, London.

RAILS FOR SALE, in great variety of sections (perfect, slightly defective, and second-hand), 14 to 82 lbs. per yard. Also CHAIRS and the other NECESSARY FITTINGS.

Apply to BREYER, RICHARDSON, and Co., Newcastle-on-Tyne.

NEW PAIR HORIZONTAL WINDING ENGINES FOR SALE.

SALE, 30½ in. cylinder, 30 ft. stroke, 6 ft. drum—instant delivery.

JOHN MOORE, 40, Lloyd-street, Albert-square, Manchester.

AIR COMPRESSING MACHINERY FOR SALE.

ONE AIR COMPRESSOR, complete, cylinder 16 in. by 30 in.; **ONE HORIZONTAL ENGINE**, with feed pump and governor, complete, suitable for driving the above compressor; **ONE AIR RECEIVER**, 3 ft. 4 in. by 13 ft. 4 in.; **ONE TURNED PULLEY**, 5 ft. 6 in. by 12 in. Made by Messrs. P. and W. MacLellan, Glasgow. The above are ready for delivery, and are quite new. They have been made to the special order of a company not now requiring such machinery. Invoice cost, £435.

For further particulars, apply to JOHN G. BARRY, Esq., 8, Old Jewry, London, E.C.

STEAM ENGINES AND STAMPS FOR SALE.

ONE 50 in. cylinder PUMPING ENGINE, 9 ft. stroke, equal beam, with **ONE BOILER**, crab wheel, and first piece of main rod.

ONE cast iron BALANCE BOB, with hanging rod.

ONE 24 in. cylinder WINDING ENGINE, 8 ft. stroke, with iron drawing cage, and **ONE BOILER**, complete.

36 heads of STAMPS, with stands, frames, lifters, &c.

Apply to WM. LANGDON, Northumberland Foundry, Launceston, Cornwall.

MINING MACHINERY.

MESSRS. F. W. MICHELL AND CO. have FOR SALE several CORNISH PUMPING, STAMPING, and WINDING ENGINES, of different sizes; **BOILERS** from 6 to 12 tons each; **PITWORK** of all sizes; **CORNISH CRUSHERS**; **STAMP AXLES**; **IRON FLAT-RODS**; **STRAPPING PLATES**; and other MATERIALS in general use in Mines, &c.

EAST CARN BREA, REDRUTH, CORNWALL.

PIT SINKING, &c.

FOR SALE (ready for delivery), an 18-horse power and a 25-horse power PORTABLE STEAM ENGINE, fitted with link motion, reversing gear, &c.

A 35-horse power PORTABLE MINING ENGINE is in a forward state, and can be supplied in three weeks.

WINDING DRUMS and GEAR in stock, and to order on short notice.

Also, ordinary PORTABLES of all sizes, VERTICAL ENGINES, MORTAR MILLS, SAW TABLES, &c., on advantageous terms.

Several good SECONDHAND PORTABLE ENGINES FOR SALE.

BARROWS AND STEWART, ENGINEERS, BANBURY.

FOR SALE, together or separately, TWO PAIRS of horizontal, direct acting, double action condensing PUMPING ENGINES, and FIVE 33-horse power BOILERS, and fittings; engines, 35½ in. cylinders, 36 in. stroke; pump, 21 in., 36 in. stroke; fly wheels, 14 ft. diameter. About 12 tons each, delivering 5700 gallons per minute, 150 ft. high. Have been very little used.

For further particulars, address W. P. FRASER, Priory Lodge, Peckham.

WATTS, RICHARDS, AND CO., PITWOOD MERCHANTS,

PENNER WHARF, NEWPORT, MONMOUTHSHIRE.

AGENTS AT SWANSEA:—

STEPHEN AND REES, SAW MILLS, GREENFIELD STREET.

Importers of every description of wood for colliery purposes.

GREENER AND ELLIS' IMPROVED FETTLING FOR

IRONWORKS, DARLINGTON, and LICENSEES may be had for USING the PATENT on application to T. GREENE, STATION STREET, DARLINGTON.

The improved yield and quality of iron produced, and the economy effected by the process, render its speedy universal adoption, in these times, a matter of necessity and certainty.—Darlington, January, 1874.

MR. R. PERCY ROBERTS,

FINANCIAL AGENT,

40, ENGLISH STREET, CARLISLE.

CAPTAIN ABSALOM FRANCIS,

GOUGHAN, ABERYSTWYTH,

MINING AGENT, ENGINEER, AND SURVEYOR.

The great success which is attending the opening and working of the Mines in the counties of Cardigan and Montgomery, and the many properties placed at the disposal of Capt. ABSALOM FRANCIS, induce him to offer his services either to ADVISE, INSPECT, REPORT, or SURVEY, for Mining Companies or private shareholders.

For terms, apply to Capt. ABSALOM FRANCIS, as above.

MR. CHARLES F. COLLOM,

MINING ENGINEER, INSPECTOR OF MINES, &c.

TAVISTOCK.

MANAGEMENT OF THE SOUTH DEVON FIRE-CLAY COMPANY.

Patentee of COLLOM'S PATENT REVOLVING FRAME FOR DRESSING TIN, AMALGAMATING GOLD, &c.

INVESTMENTS IN MINES ARRANGED FOR CAPITALISTS.

MESSRS. GROSVENOR AND CO., SHAREBROKERS,

88, PORTLAND STREET, MANCHESTER, beg to inform their clients and the public in general that they have for sale a few shares in each of several most promising Progressive Mines, which they fearlessly assert will shortly return to investors enormous profits on a small outlay and at a nominal risk.

MESSRS. TREDINNICK, 32, FLEET STREET, LONDON.

E.C. DEALERS IN STOCKS, SHARES (Home, Foreign, and Colonial), BANKS, RAILWAYS, MINES, GAS SECURITIES, and MISCELLANEOUS.

Consultations (personally), Twelve to Three. Enquiries answered, and Selected List gratuitously upon application.

Messrs. TREDINNICK deal in Great Western, Northern, London and North-Western, and Midland Stocks, London and Westminster, Union, Joint Stock, and London and County Banks, Water, Docks, Gas, Insurance, Telegraphs, and Miscellaneous.

Messrs. TREDINNICK deal in sound British Mines, and are buyers of shares in Roman Gravel, Tankerville, Van, Dolcoath, Tincroft, and Van Consols. Sound progressive shares can now be purchased with advantage. These are sure of an advance rapidly.—32, Fleet-street, London, E.C.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862 and 1867, and of the ST. BLAZE CONSOLS TIN MINE (LIMITED). Notice is hereby given that a PETITION for the WINDING-UP of the ABOVE NAMED COMPANY by the Court was, on the 10th day of February instant, presented to the Vice-Warden of the Stannaries, by William Harvey, Henry Whitford, William West, William John Rawlings, William Husband, Francis Harvey, and Nicholas James West (carrying on business at Hayle, within the said Stannaries, as General Merchants, under the style or firm of "Harvey and Co."), creditors of the said company, and that the said petition is directed to be heard before the Vice-Warden, at the Prince's Hall, in Truro, in the county of Cornwall, on Wednesday, the 25th day of February instant, at Twelve o'clock at noon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioners, their solicitors, or their agents, of his intention to do so, such notice to be forthwith forwarded to P. P. Smith, Esq., Secretary of the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same, from the petitioners, their solicitors, or their agents, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 23rd day of February inst., and notice thereof must, at the same time, be given to the petitioners, their solicitors, or their agents.

HODGE, HOCKIN, AND MARRACK, Truro, Cornwall (Solicitors for the Petitioners).

GREGORY, ROWCLIFFES, AND RAWLE, 1, Bedford-row, London (Agents of the said Solicitors).

Dated Truro, 12th February, 1874.

TUESDAY, FEBRUARY 17TH, 1874.

CARZISE MINE, MACHINERY AND MATERIALS, FOR SALE.

MR. H. V. NEWTON, Auctioneer, Valuer, &c., Polstrong Farm, Camborne, is instructed to SELL, BY PUBLIC AUCTION, on Tuesday, the 17th instant, at Twelve o'clock noon precisely, at CARZISE MINE, in the parish of Crowan, all the

MACHINERY AND MATERIALS

THEREON, COMPRISING—

A 70 in. cylinder PUMPING ENGINE, with THREE BOILERS, 12 tons each, and iron balance bob, 13 tons.

A 20 in. cylinder WHIM ENGINE, with ONE BOILER, 10 tons, and two large fly wheels, with cap, and powerful steam capstan attached.

Shears, 63 feet high, with two shies, 3 tons each.

Capstan rope, about 130 fms.

34 18 in. 9 ft. pumps.

1 13 in. 11 ft. windbore.

1 13 in. 10 ft. ditto.

1 13 in. 11 ft. working.

1 14 in. 3 ft. ditto.

1 19 in. doorpiece.

1 14 in. ditto.

1 19 in. top doorpiece.

1 19 in. H. piece.

A large quantity of flange bolts and bars; 50 fms. 14 and 15 in. pitch pine main rods; 10 fms. 10 in. rods; 10 tons faggotted rod plates; 1½ ton rod bolts and bars; 2 pairs of yokes; 20 fms. 7 in. wood bucket rods; 16 fms. 1½ in. iron ditto; set-off; 2 each 13 and 17 in. bucket prongs, clacks and valves, &c.; horse whim and shaft tackle; 80 fms. whim rope; 60 fms. ditto wire rope; 150 fms. 3 in. steam whim wire rope (new); 5 horse whim kibbles; 6 wine kibbles; water barrels; 15 2 ft., 4 ft., 8 ft., and 9 ft. shies; 100 fms. launders; 110 fms. iron stove ladders; 70 fms. dividing and casing timber.

SMITHS' SHOP.—Two smiths' bellows, 3 anvils, 2 vices, 1 ton smiths' tools, 8 pairs taps and plates, screw stock and wrens, swage anvil, plate borer, smiths' and pitmen's chest, wheelbarrows, stone carriage, &c.

CARPENTERS' SHOP.—Bench, grindstone, ladder, 2 winze trees, saw-pit frame, chests, cross-cut saw, rope, timber, &c.

MATERIAL HOUSE.—Tallow, antirust grease, 40 gallons rape oil, 4 cwt. nails, 12 steel-pointed shovels, 12 other ditto, bell wire, borer and blaster steel, sheet and scrap lead, pick and shovel hilts, tackle rope, leather, engine shag, white yarn, Stockholm and coal tar, desk, candle chest, &c.

IRON YARD.—One ton new bar iron, useful iron, bolts and bars, scrap, cast, and wrought iron, cheeks and eyes for flat rods, 2 sampling plates, large beam for scales, a great quantity of timber, wood sheds, &c.

Also the ACCOUNT HOUSE FURNITURE.

The above will be offered in One Lot, at Twelve noon precisely, and if not then sold, the Auctioneer will proceed at once to sell in lots, to suit the convenience of purchasers.

Refreshments will be provided.

To view the above, apply to the Agent, on the mine; and further information may be obtained on application to W. PAGE CARDOZO, Esq., the Purser of the mine; Capt. C. CARKEEK, Camborne; or to the Auctioneer, Camborne.

Dated February 2nd, 1874.

LEEDS AND ST. AUBYN MINES.

TUESDAY, THE 24TH FEBRUARY, 1874.

MR. R. H. CADE WILL SELL, BY AUCTION, on Tuesday, the 24th day of February instant, commencing at One o'clock in the afternoon precisely, at the LEEDS AND ST. AUBYN MINES, in the parish of Germoe, the WHOLE of the

MINE MACHINERY AND MATERIALS, consisting of—

A 33 in. cylinder ROTARY PUMPING and STAMPING ENGINE, 9 ft. stroke, with two fly wheels and TWO BOILERS, 12 and 10 tons each.

TWO IRON STAMPS AXLES, with 16 heads each, frames, stands, &c., complete.

AT KENDALL'S SHAFT.—4 10 in. 9 ft. pumps, 1 9 in. working, 1 9 in. doorpiece, 1 9 in. windbore, 62 fms. 1½ in. round iron rods, wood balance bob, 24 ft. brasses, &c., complete, 12 fms. iron stove ladders, iron set off, flange and door bolts, pump rings, 12 fathoms double skip rod, horse whim, shaft tackle and chains, 2 skips.

AT WILSON'S SHAFT.—17 1½ in. 9 ft. pumps, 1 6 in. working, 1 6 in. doorpiece, 1 6 in. windbore, 36 fms. 1½ in. iron rods, 4 9 ft. 9 in. pumps, 1 8 in. working, 1 8 in. doorpiece, 1 8 in. windbore, 25 2 ft. shies, 5 9 ft. 9 in. pumps, 10 7 in. 9 ft. ditto, 1 8 in. plunger pole, with stocking, 1 9 in. H. and top doorpiece, 1 8 in. windbore, 20 fms. 8 in. wood rods, iron balance bob, with king post and straps, 8 arm capstan, with iron axle complete, capstan chain, shears and shies, horse whim and shaft tackle, whim chain and kibbles, 2 6 in. bucket prongs, flange and doorpins, pump rings, 2 8 in. bucket prongs, with clacks, 1 9 in. pole case, 1 8 in. stuffing box and gland, 30 rod pins, rod plates, 60 fms. iron stove ladders, 65 fms. 2 in. round iron rods, 20 fms. 2½ in. ditto, 4 arm angle bob, 8 fms. 8 in. wood rods, 45½ in. rod plates, 20 fms. 1¼ in. round iron rods, rod pins, 20 fms. 8 in. launders, 9 2 ft. shies.

AT PAUL'S SHAFT.—1 10 ft. whim cage, 4 6 in. pumps, 1 6 in. doorpiece, 1 4 ft. windbore, 1 6 in. 9 ft. working, 3 4 ft. shies, triangles and chain, 6 fms. 6 in. launders.

AT BASTIAN'S SHAFT.—1 10 ft. whim cage, with chain and kibbles, 12 fathoms 1¼ in. rods, 17 fms. iron stove ladders, 4 4 ft. shies, 24 2 ft. ditto, 55 fms. 1¼ in. round iron rods, 40 fms. 2 in. ditto, 10 fms. 1¼ in. ditto, 55 fms. 1¼ in. ditto, 2 large purchase winches, 1 large ditto in frame, 4 6 in. pumps, 1 5 in. working, 1 5 in. doorpiece, 1 6 in. windbore, 1 4½ ft. matching, 1 7 in. 4½ ft. ditto.

IN SMITH'S SHOP.—Smiths' tools, 40 lb. hammers, and vice, mandril, oil steel, screwing tools, 40½ wrens and plates, metal bell and stand, screw stocks, grinding stone.

IN DRESSING HOUSE AND ON FLOORS.—1 water wheel, with driving gear for buddles, 2 centre head round buddles, 2 hand ditto, 1 cleaning frame, 16 flat self-acting frames with 7 covers, 2 hand frames, 11 flat frames with shelter and covers, 16 self-acting frames with 7 covers, 1 small water wheel, with strainer, &c., 8 self-acting frames with covers, &c., 1 hand frame, 9 feet long, covers, &c., 1 ditto, 2 buddles, tin hutch, 7 40 in. kibbles, 2 36 in. ditto, 1 30 in. ditto, 7 bottoms, 12 barrows, 30 shovels, 7 rakes, 3 tin copper bottoms, 24 fathoms 11 in. launders, 20 fathoms 14 in. ditto.

IN PITMAN'S HOUSE.—Vice, cross-cut saw, pit saw, 2 carpenters' benches, 12 feet flat-throw screws, with bar, &c., 1 11 in. plunger pole, with stocking, 1 12 in. pole case, 1 11 in. H. and top doorpiece, 1 11 in. windbore, 5 11 in. pumps, 1 small angle bob, 2 8 in. pumps, flange bolts, pump rings, stuffing-box and gland, old scrap wrought-iron, old ditto, cast ditto, old wood houses. All the tin leavings on the mine.

The above will be sold in lots to suit the convenience of purchasers.

For further particulars apply to F. R. WILSON, Esq., 20, St. Helen's place, London, E.C.; to Capt. J. CURTIS, on the mine; or to

Dated 10th February, 1874. R. H. CADE, Auctioneer, Helston.

LANIVET, NEAR BODMIN, CORNWALL.

IMPORTANT SALE OF FREEHOLD AND MINERAL PROPERTY.

TO BE SOLD, BY PRIVATE CONTRACT, THE FEE-SIMPLE AND INHERITANCE of the

ESTATE OF TRETOIL,

In the parish of LANIVET, near BODMIN, CORNWALL. The land on sale is now in the occupation of the owner, Miss SUSAN HENWOOD.

The Estate consists of a good Farm House, Barn, Stable, and other convenient Out-houses; Engine-house, Dry-house, and Mine Stack, and about 47 acres of excellent meadow and pasture land; together with certain Mining and other Mineral Rights under the last mentioned Estate, as well as under and throughout the enclosed Farm of Tretoil, now occupied by Mr. John Johns, and which also contains about 47 acres of land—the entirety of the enclosed Mineral Rights extending over more than NINETY ACRES OF LAND, together also with the Mineral and other Rights connected with the common attached to the above estate.

The Tretoil Mine is well known, and yields Copper, Tin, and other Minerals of exceedingly good quality, in great abundance.

This mine has been surveyed by several experienced and practical mining agents, whose reports will prove it to be a more than ordinary valuable mineral property, capable of being worked with a small capital, and made immediately and richly remunerative. This is apparent when the fact is considered that two diverse soils here come in contact, the granite and killas meeting in peculiar geological proximity in this property.

The proprietor, being a lady, prefers selling this valuable estate rather than working the same, or granting any sett thereof, and will afford every requisite information to any person (bona fide) desirous to treat for the purchase, and will give immediate possession on the settlement of the purchase.

Particulars and plan of the property may be seen on application to the owner, at Tretoil; or to Messrs. THOS. and H. HENWOOD, Perrose, St. Issey, Wadebridge.

Dated Feb. 11, 1874.

FOR SALE, ready for immediate delivery, ONE NEW STEAM

DONKEY FEED PUMP; inverted cylinder 10 in. diameter by 12 in. stroke, working a 6 in. diameter brass plunger, chamber brass lined, valves brass.

For price and particulars, apply to PEACOCK and TAYLOR, Engineers, &c., 44, Dean-street, Newcastle-on-Tyne.

GLAMORGANSHIRE.—FREEHOLD COAL PROPERTY FOR SALE.

MESSRS. GRAHAM AND SON (of Newport) WILL SELL, BY AUCTION, at the Westgate Hotel, Newport, Monmouthshire, on Friday, 6th March, 1874, at Twelve at noon precisely, all that FREEHOLD FARM AND LANDS, called

GIL-FACH FAR-GOED FACH

including COED COVER, situate in the parish of GELLIGAER, in the county of GLAMORGAN, and containing an area of 62½ Or. 36p., or thereabouts; the surface whereof (except 1A. 3R. 0P., taken by the Rhymney Railway) is now in the occupation of GEORGE BATTERS, Esq., and Mr. DAVID WILLIAMS, at the respective annual rents of £44 and £28, and also a way leave of one penny per ton on all coal passing through the property.

This property is intersected by the Rhymney Railway, and is thus connected with the shipping port of Cardiff (16½ miles distant) and Rhymney, and also the important iron-making districts of Tredegar, Sirhowy, Ebbw Vale, Nant-y-Glo, and Blaenavon. By means of the Bargoed Rhymney Railway and its connections access is given to Dowlais and Merthyr.

This property contains all the seams of coal of the Merthyr Tydfil district. The Mynyddylwyn seam has been nearly worked out under the property, but that well known as the Birthdir seam, it is believed, will be found there at a depth of not more than 250 yards, as it is now being extensively worked in the Rhymney, the Rhymney Bargoed, and Taff Bargoed Valleys.

This seam, at the Darran Pit, two miles north of this property, proves from 3 ft. 8 in. to 3 ft. 9 in. thick, in one solid block of coal, with excellent rock top. At the new Cefn Brithdir Pit it proves about the same thickness, and equally good in quality.

The Brithdir coal is highly bituminous, a good coking coal, and in great demand for iron-making.

The seam coals, as worked by the Dowlais Iron Company at the Fochriw Pits, and by the Powell's Duffryn Colliery Company (Limited), at their New Tredegar Pits, will doubtless be found under this property at a depth of from 500 to 600 yards.

The present sale offers a rare opportunity of buying a freehold coal property, such as very seldom occurs.

Printed conditions of sale, with plan of the property, &c., and all further particulars, may be had on and after Monday, 16th February, 1874, on application to the Auctioneers, at Newport: CHARLES HENRY JAMES, Esq., Mining Engineer, 8, Courtland Terrace, Merthyr Tydfil; or to C. F. and G. JAMES, Solicitors, Merthyr Tydfil.—February 9, 1874.

IN LIQUIDATION.

THE REAFADDA MINING COMPANY (LIMITED).

TO BE SOLD, BY TENDER, the ESTATE and INTEREST of the above company in the COPPER MINES, situate in the parish of HOLYFORD, county of TIPPERARY, known as the

"REAFADDA" or "HOLYFORD" MINES.

With the RIGHTS, &c., thereto belonging, comprised in a lease for 35 years, from the 25th day of March, 1871, at a royalty of 1-16th for copper ore and 1-12th for lead and other ore, &c., and subject to the covenants and conditions contained therein.

The horse whim, plant, and tools may be seen on application to Mrs. Alice Hayes, at the farm adjoining the mine, which is about ten miles from the Limerick Junction Station, having a good road thereto.

Sealed tenders to be endorsed and sent to the Liquidator, up to Three P.M., on Wednesday, the 25th instant, but he does not bind himself to accept the highest or any tender.

FOR 1873.

POST FREE, TWO SHILLINGS, IN STAMPS.

BAILEY'S ILLUSTRATED INVENTIONS,

(Sixteenth edition), 25th thousand, 1000 engravings, 150 pages, weight 10 ounces

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INVENTORS, PATENTEES,
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AND MANUFACTURERS OF

**Engineers' & Contractors' Sundries,
AND USEFUL INVENTIONS**

For Cotton Spinners, Railway Companies, Engineers, Colliery Proprietors, and nearly every description of Employers of Labour, County Gentlemen, &c., &c.;

ALSO OF EVERY DESCRIPTION OF

ENGINE AND BOILER FITTINGS,

PYROMETER INVENTORS AND PATENTEES;

ELECTRIC TELEGRAPH ENGINEERS

AND

TURRET CLOCK MAKERS;

Makers of the celebrated

AUTOMATIC CLOCKS,

For indicating the pressure of steam day and night,
rise and fall of the tide, &c.

**Winding Indicators, Signal Bells,
&c., &c.**

DEPARTMENTS:

- I.—BRASS FOUNDRY & STEAM FITTING DEPARTMENT.
- II.—ENGINEERS' SUNDRIES DEPARTMENT.
- III.—SMALL MACHINE, PUMP, AND FIRE ENGINE, &c., &c. DEPARTMENT.
- IV.—CLOCK DEPARTMENT.
- V.—ELECTRIC TELEGRAPH DEPARTMENT.

All profusely illustrated, described, and priced.

**J. BAILEY AND CO.,
ALBION WORKS,
SALFORD,
MANCHESTER.**

The above is sent free to Working Men's Clubs, Mechanics Institutions, or Improvement Societies.

BAILEY'S SPECIALITIES FOR 1873.

BOILER FEEDING

THE GRINDROD BOILER FEEDER,

Which keeps the water at one definite height day and night.
MUCH IN USE IN THIS DISTRICT.

THE

**STILWELL WATER HEATER
AND
LIME EXTRACTOR.**

THE HALLAM GIFFARD INJECTOR.

These are all high-class inventions, and are with confidence recommended.

CIRCULARS ON APPLICATION.

MINES REGULATION ACT

STEMMERS, PRICKERS, CHARGERS, AND SCRAPERS,

Which have been tried and found to answer the purpose, are

MANUFACTURED BY
**JAMES WHITFIELD,
OXFORD STREET, BIRMINGHAM.**

DIAMOND FUEL COMPANY (LIMITED),

FOR PRODUCING SOLID FUEL FROM COAL OR
COKE DUST.

THIS COMPANY are now GRANTING LICENSES for the USE
of their PATENT in the UNITED KINGDOM.

By being able to dispense with the costly processes employed in the manufacture of existing patent fuels, and producing an article free from their defects, this company believe their fuel, when generally known, must supersede all other patent fuels.

By its employment the owners of Anthracite Collieries may utilise the small, which has been hitherto wasted.

The proprietors of Gas Works may by its use bind together and use over again their coke breeze.

Application to be made to the SECRETARY, at the office of the company,—

23, OLD BROAD STREET, CITY, E.C.

HUNTRISS AND SWINBURNE'S

PATENT STEAM

JET GAS EXHAUST AND PROPELLER.

THE PATENTEES beg respectfully to CALL the ATTENTION
of COLLIERY PROPRIETORS, MINING ENGINEERS, COLLIERY
ENGINEERS, and OTHERS to their NEW and IMPROVED METHOD of
PROPELLING GAS, by means of an infinitesimally small Steam Jet, to Pit
bottoms, to light up Hangings on Main Roads, Stables, Underground Engines, or
any other places where gas-lights are required at considerable depths below the
level of the gasometers, which do not require weighting.

The system, from its extreme simplicity, non liability to disarrangement, cheapness of construction, and thorough efficiency, renders it superior to all hitherto tried systems of obtaining cheap and good lights underground, and they invite attention to their apparatus, working daily at the principal collieries in Yorkshire, Derbyshire, Northumberland, South Staffordshire, &c.

For particulars, terms, &c., apply to—

**HUTCHINSON BROTHERS,
GAS ENGINEERS AND SOLE AGENTS,
BARNSELY.**

J. WOOD ASTON AND CO., STOURBRIDGE

(WORKS AND OFFICES ADJOINING CRADLEY STATION),

Manufacturers of

CRANE, INCLINE, AND PIT CHAINS,

Also CHAIN CABLES, ANCHORS, and RIGGING CHAINS, IRON and STEEL SHOVELS, SPADES and FORKS, ANVILS, VICES, SCYTHES, HAY and CHAFF KNIVES, PICKS, HAMMERS, NAILS, RAILWAY and MINING TOOLS, FRYING PANS, BOWLS, LADLES, &c., &c.

Crab Winches, Pulley and Snatch Blocks, Screw and Lifting Jacks, Ship Knees, Forgings, and Use Iron of all descriptions,
STOURBRIDGE FIRE BRICKS AND CLAY.

FRANCIS MORTON & CO., LIMITED, LIVERPOOL,

Manufacture, in Galvanised and Corrugated Iron,

IRON ROOFS, IRON BUILDINGS, IRON SHEDS,

Which they have extensively supplied and erected for mining requirements at home and abroad.

ESTIMATES FURNISHED ON RECEIPT OF PARTICULARS.

F. M. & CO'S PATENT IRON ROOFING TILES OR SLATES ARE IN SPECIAL FAVOUR FOR TEMPORARY COVERING,

They require considerably less framework to carry them than ordinary slates or tiles.

ILLUSTRATED CATALOGUE ON APPLICATION.

London Office, 36, PARLIAMENT STREET, S.W.

THOMAS WARDEN & SON, IRON, STEEL, AND GENERAL MERCHANTS,

LIONEL STREET, BIRMINGHAM.

Manufacturers of Anvils, Vices, Hammers, Bellows, Tue Irons, Hydraulic and Screw Jacks, Crabs, Cranes, Spades, Shovels, Picks, Arms and Boxes, Axles, Springs, Hurdles and Fencing, Screw Bolts, Washers, Hames, Chains, Files, Nails, &c., &c.

SECOND-HAND RAILS, AND EVERY DESCRIPTION OF RAILWAY, COLLIERY, AND CONTRACTORS' PLANT
ALWAYS ON HAND.

CHARLES PRICE AND CO'S

PATENT RANGOON ENGINE OIL.



THIS OIL is suitable to every kind of Machinery; it is used almost exclusively in Her Majesty's Dockyards and Fleet, and by the War Office and East India Government; as well as by the Royal Mail Steam Packet Co., Pacific Steam Navigation Co., P. and O. Co., Cunard Co., and by most of the other important Royal Mail Steam Fleets in the kingdom. It is also extensively employed on the various railways, and by many of the leading engineering and manufacturing firms at home and abroad.

"I hereby certify that the Rangoon Engine Oil, manufactured by Messrs. Chas. Price and Co., is free from any material which can produce corrosion of the metal work of machinery. It is calculated, indeed, to protect metallic surfaces from oxidation, and from its peculiar character, is not liable to lead to spontaneous combustion of cotton waste or any similar material which might become imbued with it, as is the case with Rape, Gallipoli, and Olive Oils. The lubricating power of this oil is equal to Sperm or Lard Oil."

T. W. KEATES, F.C.S., &c., &c., Consulting Chemist to the Board of Works.

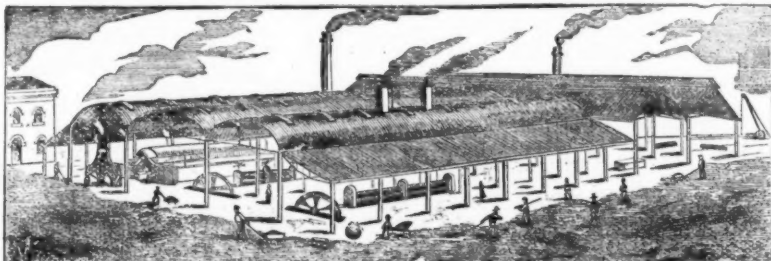
Extract from Mr. BAXTER'S Speech in the House of Commons, May 31st, 1870:—

"Chas. Price and Co.'s Rangoon Oil—"a vastly superior article" (speaking of Gallipoli Oil at £72 per ton)—"was obtained for from £40 to £45 per ton." Every parcel of the Oil sent from the Works bears the Trade Mark of the Firm, and as many spurious imitations of the Rangoon Engine Oil are sold purchasers are requested to observe that none is genuine which does not bear this mark.

Oil, Tallow, and Colour Merchants, Seed Crushers, Turpentine Distillers, &c.

London: CASTLE BAYNARD, UPPER THAMES STREET, & MILLWALL, POPLAR—Works: ERITH, KENT.

ISAAC DIXON, HATTON GARDEN, LIVERPOOL,



MANUFACTURER OF
CORRUGATED CURVED SELF-SUPPORTING IRON ROOFS,
Galvanised or painted (the most economical form of roof up to 45 ft. span); also

WROUGHT-IRON FRAMED ROOFS,
Of every description, suitable for wide spans. These roofs are specially adapted for Forges, Rolling Mills, and general Roofing for Ironworks, Shipbuilding Yards, Mines, Collieries, Railways, &c. For Roofs with Timber Framing, I.D.'s Galvanised or Painted Corrugated Slates or Sheets form a durable and cheap covering, costing only about the same, when fixed complete, as Felt and Boards. Iron Cottages, Stores, Offices, and Buildings of any size or design. Wrought-iron Tanks. DRAWINGS AND ESTIMATES ON APPLICATION.

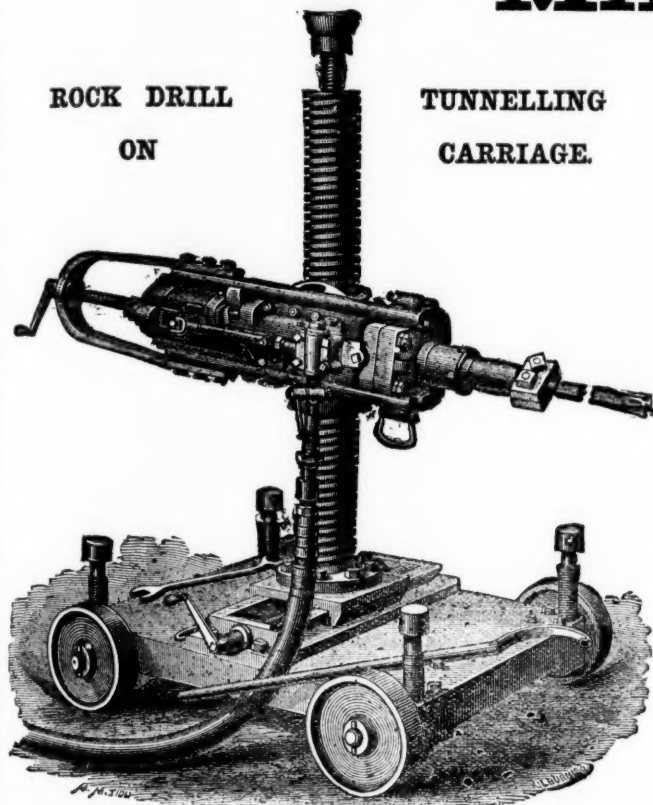


TWO GRAND MEDALS for PROGRESS AT THE VIENNA EXHIBITION



AWARDED TO

THE "BURLEIGH" ROCK DRILLING AND AIR COMPRESSING MACHINERY.



ROCK DRILL ON

TUNNELLING CARRIAGE.

ALSO
Two Silver Medals, Highland and Agricultural Society of Scotland, 1873.
Three Silver Medals, Manchester and Liverpool Agricultural Society, 1873.

References to Users in all parts of the World.

Adapted for Mining, Quarrying, Tunnelling, Shaft-Sinking, &c.

NEW ILLUSTRATED CATALOGUES, PRICE LISTS, and ESTIMATES, and every Information, POST FREE, On application to the Patentees and Sole Proprietors,

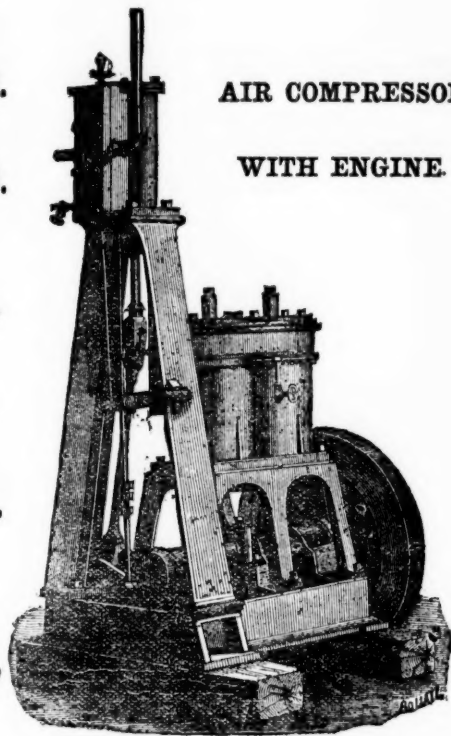
THOMAS BROWN & CO.
96, Newgate Street, London.

Sole Agents—

WILSON, McLAY & CO., 2, Talbot Court, LONDON, and
87, St. Vincent Street, Glasgow.

Sole Makers—

CRAVEN BROTHERS, MANCHESTER.



AIR COMPRESSOR WITH ENGINE.

Adapted for Driving Rock Drills, Coal-Cutting, Pumping, and Underground Machinery, or where the Motive Power has to be conveyed long distances.

The Drills (in 5 Sizes) can be Mounted on any Description of Carriage or Support, according to the Nature of the Work.

"BURLEIGH" MACHINE VERSUS HAND DRILLING.

* Extract from Paper read before the British Association at Bradford, 1873, on Brain's System of Mining and Shafting Sinking at the Drybrook Iron Mines, Forest of Dean, using the "Burleigh" Rock Drilling and Air Compressing Machinery:

(Shaft 10 ft. Diameter.)

COST OF SHAFT BY HAND

During a Fortnight.

Sinkers, twelve, 12 days each, at 5s. 6d.	£39 12 0
Water Fillers, three, 12 days each, at 3s. 6d. . . .	6 6 0
Blasting powder	1 2 0
Total	£47 0 0

Depth Sunk 3 yards—Cost per yard . . . £15 13s. 4d.

COST OF SHAFT BY MACHINE

During a Fortnight.

Sinkers, three, 12 days each, at 5s. 9d.	£10 7 0
Labourers, six, 12 days each, at 3s. 6d.	12 12 0
Engine Stokers, two, 12 days each, at 2s. 6d. . . .	3 0 0
Dynamite, 60 lbs., at 2s.	6 0 0
Electric Fuses (Brain's) 20 per day, at say 6d. each	6 0 0
Coal for Air Compressing Engine, 12 tons small, at 10s.	6 0 0
Oil for engines	0 5 0
Total	£44 4 0

Depth Sunk 5 yards—Cost per yard . . . £8 16s. 9d.

THE ABOVE STATEMENT REPRESENTS WHAT IS NOW BEING DONE AT THE ABOVE MINE.

ADDITIONAL TESTIMONY.

(COPY.)

Messrs. T. BROWN & Co., 96, Newgate Street, London, E.C.

DEAR SIRs,—I have much pleasure in informing you that the Rock Drill and High-pressure Boiler, with which you supplied us, are both working extremely well.

I am, yours truly,

The Weardale Iron and Coal Company, via Darlington, Sept. 6th, 1873.

(For the Weardale Iron and Coal Company, Limited),

J. R. CRONE.

(COPY.)

DEAR SIRs,—In reply to yours of 2nd inst., I am sorry I have not time to go into the comparative results of hand labour in sinking with that of the work done by your "Burleigh Drill." All I can say is, that for the last few months it has been giving me every satisfaction, and there is a marked difference in the progress of our sinking operations.

I am, yours truly,

JOHN MAIN.

* The Paper can be had upon application to **THOMAS BROWN & CO.,** 96, Newgate Street, London, E.C.

THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.	Total divs.	Per share.	Last paid
1500	Alderley Edge, c, Cheshire*	10 0 0	—	—	11 16 8	0 8 0	Oct. 1873
20000	Alt-y-Crib, c, Talybont	2 0 0	—	—	0 6 0	0 6 0	June 1873
30000	Bampfylde, c, s, Devon	1 0 0	—	—	0 2 0	0 2 0	June 1873
5000	Bass, c, Gwent	3 0 0	—	—	0 10 0	0 10 0	June 1873
15000	Boswell Downs, c, St. Just	3 0 0	—	—	0 5 0	0 5 0	Oct. 1871
200	Botallack, c, St. Just	106 5 0	65	60 65	619 15 0	5 0 0	Oct. 1871
5000	Bronfloy, c, t, (30000 Deb. B. Sp. et.)	100 0 0	25	—	110 0 0	2 0 0	Jan. 1872
4000	Brookwood, c, Buckfastleigh	1 16 0	—	—	2 14 0	0 6 0	Oct. 1872
8348	Cargill, c, s, Newlyn	4 16 11	1 1/2	1 1/2	4 16 3	0 12 6	Oct. 1872
6000	Cashwell, c, Cumberland*	2 10 0	—	—	1 4 0	0 4 0	Aug. 1872
7500	Castle-an-Dinas, c, St. Columb*	2 0 0	—	—	0 10 0	0 2 0	July 1873
1000	Carn Brea, c, t, Illogan	35 0 0	65 1/2	50 55	508 0 0	1 0 0	Nov. 1873
1000	Carn Brea, c, t, Penryn	3 0 0	—	—	0 7 0	0 7 0	June 1873
2450	Cook's Kitchen, c, Illogan	19 14 9	11	8 9	11 17 0	0 7 0	June 1873
10240	Devon Gt. Consols, c, Tavistock	0 12 0	2	1 1/2	116 10 0	0 12 0	May 1872
4296	Dolcoath, c, c, Camborne	10 14 10	50	44 45	104 4 2	0 12 6	Jan. 1874
10000	East Boleward, c, t, Sancreed*	1 0 0	1 1/2	1 1/2	0 2 11 0	0 5 0	Feb. 1874
6144	East Caradon, c, St. Austell	2 14 6	1 1/2	1 1/2	14 19 0	0 2 0	Oct. 1872
300	East Darnley, c, Cardiganshire	32 0 0	9	—	218 10 0	1 0 0	Jan. 1874
5600	East Pool, c, t, Illogan	0 9 9	9	8 0	13 11 3	0 2 6	May 1873
6000	Exmouth, c, t, Penryn	0 7 6	—	—	0 10 0	0 1 0	May 1872
2800	Fosdale, c, t, Isle of Man*	25 0 0	—	—	80 15 0	0 10 0	Sept. 1872
40000	Glasgow Carr, c, (30000 £1 p., 10000 15s. p.)	4 0 0	—	—	0 4 10 0	0 1 0	Sept. 1872
15000	Great Laxey, c, Isle of Man*	4 0 0	13 1/2	12 1/2	16 11 0	0 10 0	Oct. 1873
25000	Great West Van, c, Cardigan	2 0 0	1 1/2	1 1/2	0 1 0	0 1 0	Sept. 1872
5000	Great Wheel Vor, c, Helston	40 5 0	2	1 1/2	15 19 6	0 2 6	June 1872
6400	Green Hurth, c, Durham*	0 6 0	5 1/2	5 1/2	1 4 0	0 4 0	Nov. 1873
1024	Herdfoot, c, near Liskeard	8 10 0	4 1/2	4 1/2	62 5 0	0 15 0	Oct. 1872
15000	Hingham Downs, c, Calstock	(£1 sh.)	—	—	0 3 11 1/2	0 5 0	Dec. 1872
400	Illogan, c, t, Penryn	15 15 0	3 1/2	3 1/2	561 10 0	1 0 0	Jan. 1874
5120	Illogan, c, t, Penryn	0 10 0	—	—	0 17 6	0 1 6	Jan. 1874
9000	Minera Mining Co., c, Wrexham*	5 0 0	35	30 35	63 5 8	0 4 0	Oct. 1873
30000	Mining Co. of Ireland, c, c, t	7 0 0	6 1/2	6 1/2	0 8 0	0 3 6	July 1872
12000	North Hendre, c, Wales	2 10 0	—	—	0 12 6	0 2 6	Jan. 1874
2000	North Lant, c, St. Just	10 17 0	3	2 1/2	4 13 0	0 12 0	Sept. 1872
5694	Pedn-an-drea, c, Redruth	8 2 0	3	2 1/2	0 5 0	0 5 0	Nov. 1871
5000	Penhalls, c, St. Agnes	3 0 0	2 1/2	2 1/2	3 3 0	0 2 0	Jan. 1874
60000	Penrath, c, t, Penryn	2 0 0	1 1/2	1 1/2	0 10 0	0 2 0	Nov. 1873
6000	Phoenix, c, t, Linkinhorne	4 3 4	6	5 1/2	39 19 0	0 4 0	Nov. 1872
1772	Polberris, c, St. Agnes	15 0 0	—	—	1 12 6	0 5 0	Mar. 1872
18000	Prince Patrick, c, s, t, Holywell	1 0 0	—	—	0 5 0	0 2 0	Jan. 1874
1120	Providence, c, t, Lant (last call Dec. 73)	12 17 0	7	7 8	104 12 6	0 10 0	Sept. 1872
12000	Roman Gravel, c, Salop	16 7 0	17	16 1/2	3 5 0	0 8 6	Dec. 1873
10000	Shelton, c, t, St. Austell	1 0 0	—	—	0 1 0	0 1 0	Sept. 1872
6000	Slimeford Dressing, c, Calstock*	1 0 0	—	—	0 1 1	0 1 1	Sept. 1872
512	South Caradon, c, St. Austell	1 5 0	80	75 80	712 0 0	1 0 0	Jan. 1874
5000	South Caradon, c, St. Austell	1 5 0	3	2 1/2	1 1 0	0 1 0	Jan. 1874
5000	South Caradon, c, St. Austell	1 5 0	3	2 1/2	1 1 0	0 1 0	Jan. 1874
242	Spern Moor, c, St. Just	38 17 0	—	—	17 5 0	0 10 0	June 1872
8771	St. Just Amalgamated, c, t	3 10 0	—	—	0 9 0	0 4 0	Nov. 1871
12000	Tankerville, c, Salop	6 0 0	9 1/2	8 1/2	3 8 0	0 6 0	Feb. 1873
25000	Terras, c, St. Austell	1 0 0	—	—	0 3 0	0 1 6	Oct. 1872
6000	Tinroft, c, t, Pool, Illogan	9 0 0	39	35 37 1/2	46 18 6	0 15 0	Nov. 1872
4000	Truro Consols, c, Helston	5 15 0	35	34 35	9 11 0	0 10 0	Nov. 1872
15000	Van, c, t, Llanidloes	4 5 0	6 1/2	6 1/2	13 17 0	0 15 0	Dec. 1873
8000	W. Chiverton, c, t, Penryn	27 3 0	11	10 11	52 10 0	0 15 0	June 1873
2048	West Wheel Frances, c, Illogan	27 3 0	11	10 11	312 6 0	0 4 0	Oct. 1872
512	Wheel Basset, c, Illogan	5 2 6	25	20 22	638 10 0	1 10 0	Aug. 1872
4295	Wheel Killy, c, St. Agnes	5 4 6	9 1/2	9 1/2	11 1 6	0 6 0	Nov. 1873
806	Wheel Margaret, c, t, Uny Lant	13 17 6	2	1 2	82 2 0	0 10 0	May 1872
10000	Wheel Mary, c, St. Dennis	5 0 0	—	—	0 1 0	0 1 0	Jan. 1873
1024	Wheel Mary Ann, c, Menheniot	10 0 0	1 1/2	1 1/2	74 5 6	0 2 6	Aug. 1873
80	Wheel Oweles, c, St. Just	70 0 0	—	—	622 10 0	4 0 0	Aug. 1872
12000	Wheel Russell, c, t, Penryn	73 0 0	20	17 1/2	256 5 0	0 10 0	June 1871
1354	Wheel Seton, c, t, Camborne	73 0 0	20	17 1/2	256 5 0	0 10 0	June 1871
15000	Wheel Tregoes, c, t, Roche	1 0 0	—	—	0 1 0	0 1 0	Jan. 1873
10000	Wheel Whistler, c, t, Warleggan*	1 0 0	—	—	0 1 6	0 1 6	Mar. 1873
2000	Wicklow, c, s, t, c, Wexham	2 10 0	3 1/2	2 1/2	52 9 0	0 2 6	Mar. 1872

FOREIGN DIVIDEND MINES.

Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.	Total divs.	Per share.	Last paid
350000	Alamillos, c, Spain*	2 0 0	2 1/2	1 1/2	1 1 0	0 2 6	Mar. 1873
300000	Almaden, c, Spain*	1 0 0	—	—	0 4 3	0 1 0	May 1873
20000	Australian, c, South Australia*	7 6 0	1 1/2	1 1/2	0 11 6	0 2 0	July 1873
10000	Battle Mountain, c, c, (6240 paid)	5 0 0	—	—	0 10 0	0 10 0	Nov. 1872
15000	Birdseye Creek, c, California*	4 0 0	3 1/2	2 1/2	0 9 0	0 2 0	July 1873
6000	Bensberg, c, Germany*	10 0 0	7 1/2	7 1/2	0 17 4	0 8 0	July 1873
12320	Burna, c, c, So. Australia	8 0 0	—	—	56 0 0	0 10 0	Oct. 1872
20000	Cape Copper Mining, c, So. Africa	7 0 0	29 1/2	28 1/2	14 15 0	1 0 0	Dec. 1873
40000	Cedar Creek, c, California*	5 0 0	2 1/2	2 1/2	0 5 0	0 2 6	June 1873
30000	Central American Association*	0 15 0	—	—	0 6 0	0 1 0	July 1869
1500	Chicago, c, Utah*	7 0 0	—	—	0 16 0	0 4 0	Sept. 1873
21000	Colorado, c, t, Colorado*	5 0 0	4	3 1/2	0 8 0	0 2 0	Oct. 1871
75162	Don Pedro del Rey, c, t	0 16 0	4	3 1/2	2 5 0	0 2 0	Mar. 1872
35000	Eberhardt and Aurora, c, Nevada*	10 0 0	4	3 1/2	1 0 0	0 1 0	July 1871
2552	Eldorado, c, Nova Scotia*	10 0 0	9	—	2 5 0	0 15 0	June 1873
60000	Emma, c, g, s, Utah (25,000 fully pd.)	20 0 0	4	3 1/2	3 12 0	0 6 0	Dec. 1872
10000	English and Australian, c, St. Austell	2 10 0	1 1/2	1 1/2	2 7 3	0 2 6	Mar. 1873
15000	Ferguson, c, California*	2 0 0	—	—	0 3 0	0 3 0	April 1872
30000	Flagstaff, c, Utah*	10 0 0	3 1/2	2 1/2	4 2 0	0 5 0	July 1873
25000	Fortuna, c, Spain*	2 0 0	6	5 1/2	3 19 4	0 6 0	Dec. 1873
8000	Gold Hill, c, t, Penryn	1 0 0	—	—	0 2 4	0 2 4	Oct. 1872
80000	Kapunda Mining Co., Australia	1 3 0	3 1/2	3 1/2	0 14 0	0 2 0	July 1873
20000	Last Chance, c, s, Utah	5 0 0	1 1/2	1 1/2	14 3 4	0 2 6	Dec. 1873
15000	Llanes, c, Spain*	3 0 0	4 1/2	3 1/2	1 11 6	0 1 6	Mar. 1873
7837	Lusitania, Portugal* (45 shares)	3 0 0	1 1/2	1 1/2	0 5 0	0 5 0	Dec. 1872
15000	Mammoth Copperopolis of Utah, c, s	10 0 0	5	4 1/2	0 4 0	0 4 0	Jan. 1873
6000	Mountain Chief, c, Utah*	10 0 0	—	—	0 6 0	0 3 0	July 1873
18000	Prussian Mining & Ironworks, c, t	30 0 0	21	19 21	0 8 0	0 3 0	July 1873
10000	Pontefract, c, t, Penryn	20 0 0	—	—	14 11 1	1 3 0	Oct. 1871
100000	Port Phillip, c, t, Penryn	5 0 0	6 1/2	6 1/2	1 7 6	0 10 0	Jan. 1874
4000	Richmond Consols, c, Nevada*	1 0 0	—	—	12 per cent.	—	Nov. 1873
120000	Scottish Australian Mining Co., t	1 0 0	1 1/2	1 1/2	1 8 0	0 2 0	Dec. 1873
112500	Sierra Buttes, c, California*	2 0 0	2 1/2	2 1/2	0 14 2	0 2 0	Nov. 1873
60000	South Aurora, c, Nevada*	5 0 0	—	—	2 8 0	0 5 0	Dec. 1873
15000	Sweetland Creek, c, California*	4 0 0	5 1/2	4 1/2	0 5 0	0 2 6	Nov. 1872
20000	Tolima, c, s, (6000 sh. are £5 f. pd.)	3 0 0	—	—	26 10 0	8 0 0	Dec. 1872
500	Westphalian, c, c, Prussia*	20 0 0	—	—	—	—	—

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.	Last Call.
50000	Anglo Argentine, <i>g, s</i> , 77 (15 per cent. Preference).....	1 0 0	36...	36 3/4	Fully pd.
20000	Anglo-Australian, <i>g, s</i> , Victoria.....	2 10 0	...	...	Sept. 1879
20000	Australian United, <i>g, s</i> , Victoria*.....	2 10 0	36...	36 3/4	Fully pd.
3000	Bellavista, <i>s, Peru</i> * (£10 shares).....	9 10 0	...	...	June 1873
20000	Blue Tent, <i>hyd, c</i> , California.....	5 0 0	...	...	Fully pd.
60000	Brazanza, <i>g, Brazil</i> *.....	0 15 0	...	...	Oct. 1870
12000	Camp Floyd, <i>s, Utah</i> *.....	10 0 0	...	...	Fully pd.
35000	Cesena Sulphur Company, Romanga, Italy*.....	10 0 0	...	...	Fully pd.
80152	Chontales, <i>g, s</i> , Nicaragua* (and 12,542 of £1 ls.).....	2 0 0	1	36 3/4	Fully pd.
4000	Clifton, <i>s, Colorado</i> *.....	5 0 0	...	...	Fully pd.
10000	Crecent, <i>g, s</i> , Plumas County, California.....	10 0 0	...	...	June 1873
100000	Culaba, <i>g, Minas Geraes, Brazil</i> *.....	0 17 6	...	...	June 1872
10000	Douglas, <i>s, Georgetown, Col.</i>	5 0 0	...	...	Fully pd.
7500	East Sheboygan Preference* (40,000 ordinary shares).....	2 0 0	...	...	Fully pd.
25000	Excelsior Hydraulic Gold Washing Co., California*.....	6 0 0	...	...	Dec. 1871
60000	Exchequer, <i>g, s</i> , California*.....	1 0 0	...	...	Fully pd.
80000	Frontino and Bolivia, <i>g, s</i> , New Granada*.....	2 0 0	36...	36 3/4	Fully pd.
50000	General Brazilian, <i>g, s</i>	1 0 0	...	...	Fully pd.
10000	Goetz Tunnel Co., Georgetown, Col.	7 0 0	...	...	Fully pd.
40000	Holcombe Valley, <i>g, s</i> , California.....	1 0 0	1	...	July 1873
6000	Hornachos, <i>s, s, f</i> , (£10 shares).....	7 0 0	...	...	Jan. 1874
10000	Hudson, <i>g, California</i> *.....	1 0 0	...	...	April 1873
20000	Imperial Brazilian Collieries, Brazil*.....	5 0 0	...	...	Fully pd.
20000	I. X. L., <i>g, s</i> , California*.....	5 0 0	...	...	Fully pd.
50000	Javali, <i>g, s</i> , Nicaragua.....	2 0 0	36...	36 3/4	Fully pd.
11000	Kansas, <i>g, s</i> , Colorado.....	5 0 0	...	...	Fully pd.
12000	Lanestosa, <i>c, s, f</i> , Vizcaya, Spain (42 shares).....	1 7 8	...	...	Aug. 1873
165000	London and California, <i>g, s</i>	2 0 0	...	...	Fully pd.
75000	Malabar, <i>g, Colombia</i> * (65000 issued).....	1 0 0	36...	36 3/4	Fully pd.
4000	Malaga, <i>f, Spain</i> *.....	10 0 0	1	...	Fully pd.
20000	Malaga, <i>g, Colombia</i> *.....	1 0 0	1	36 3/4	Fully pd.
12000	Menzenberg, <i>c, Honnet, Germany</i> *.....	5 0 0	...	...	Fully pd.
14000	Montague & Waverley Gold Quartz Crushing Co., N. Scot.	2 0 0	...	...	Allotment
4000	Monta Loretto, <i>g, s</i> , Italy.....	5 0 0	...	...	Fully pd.
15000	New Pacific, <i>g, s</i> , Nevada*.....	7 0 0	36...	36 3/4	Fully pd.
85500	New Quebrada, <i>c, Venezuela</i> *.....	5 0 0	43 1/2...	43 1/2 4 1/2	Fully pd.
50000	New Rosario, <i>s, Mexico</i> *.....	1 0 0	13 1/2...	70 1	Fully pd.
20000	New Zealand kapanga, <i>g, s</i> , Coromandel*.....	5 0 0	13 1/2...	...	Fully pd.
10000	Newfoundland, <i>c, s</i>	10 0 0	...	...	Fully pd.
20000	North American, <i>g, s</i>	4 0 0	...	...	Fully pd.
50000	Panuello, <i>c, Chile</i> *.....	4 0 0	2 1/2...	2 3/4	Fully pd.
60000	Pastorena United, <i>g, s</i> , Italy.....	3 0 0	24...	26 3/4	Fully pd.
60000	Rica, <i>g, Colombia</i> * (40000 issued).....	1 0 0	36...	36 3/4	Fully pd.
200000	Rio Tinto, <i>c, s</i> , Huelsa, Spain.....	5 10 0	6	51 1/2 0	Jan. 1874
100000	Rossa Grande, <i>g, Brazil</i> * (£1 shares).....	0 19 0	5 1/2...	36 3/4	July 1872
32500	Ruby Consolidated, <i>s, Nevada</i> *.....	10 0 0	...	...	Fully pd.
30000	Russia, <i>c, Orenburg and Uta</i> *.....	10 0 0	8 1/2...	2 3/4 8 1/2	Fully pd.
25000	San Pedro, <i>c, Chile</i>	2 0 0	24 1/2...	1 1/2 2	Fully pd.
30000	San Pedro de Macoris, <i>g, Brazil</i>	2 0 0	24...	1 1/2 2	Fully pd.
15000	Saurat, <i>s, Utah</i> *.....	6 0 0	76...	36 3/4	May 1873
10000	Silver Plume, <i>s, Colorado</i> *.....	1 0 0	...	...	Fully pd.
27500	Snowdrift, <i>s, Colorado</i> *.....	2 0 0	...	...	Fully pd.
2200	St. John del Rey, Brazil*.....	100 0 0	195	190 195	Oct. 1872
25000	Star of Nevada, <i>c</i> , (12000 issued).....	2 0 0	...	...	Fully pd.
30000	Tecoma, <i>s, Utah</i> *.....	10 0 0	1	5 1/2 7	Fully pd.
20000	Thornhill Reef, <i>g, s</i> , Australia.....	2 0 0	24...	1 1/2 2	Fully pd.
44000	Union Consolidated, <i>g, s</i> , Mexico*.....	29 7 8	24...	1 1/2 2 1/4	May 1873
17000	Utah, <i>g, s, f</i> , Utah* (£5 sh.).....	4 10 0	2	1 1 1/4	Oct. 1873
75000	Yorke Peninsula, <i>c, s</i> , South Australia.....	1 0 0	36...	34 3/4	Fully pd.
8000	Yudanamutana, <i>c, s</i> , South Australia*.....	3 0 0	...	...	Fully pd.